UNIVERSITY OF KWAZULU-NATAL

DEVELOPING ENTREPRENEURIAL SELF-EFFICACY: A TRANSFORMATIVE LEARNING THEORY APPROACH

By

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DECLARATION

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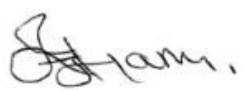

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ABSTRACT

The key challenges facing South Africa are unemployment and the high level of crime, especially violent crime. With an expanded unemployment rate of 36.8% and an even higher youth unemployment rate of 52.2%, it is no wonder that the level of crime is high. There is a direct link between a culture of lawlessness, unemployment and education derailment fuelling the poverty trap in SA. Successful entrepreneurship on the other hand affords an opportunity to end generational poverty.

This study proposed using a transformative learning theory approach to entrepreneurship education. Specifically, it aimed to investigate the use of Transformative Learning to develop Entrepreneurial Self-Efficacy (ESE) in the youth. This was achieved by conducting a longitudinal study of the Shifting Hope, Activating Potential Entrepreneurship (SHAPE) training programme.

From an analysis of the data, the study found the following:

1. ESE for participants in the SHAPE programme increased. At the end of the SHAPE programme participants tended to respond more positively to various aspects of ESE;

2. The differences in ESE between males and females were eliminated by the SHAPE programme. By session 7 there was no statistically significant difference between the ESE for males and females and

3. The SHAPE programme led to an increase in ESE in the context of Disorienting Dilemma, Critical Reflection, Reflective Discourse and Action.

From the longitudinal study of the SHAPE programme and a review of entrepreneurship education literature, the study argues that it is difficult to determine student transformation in the sense of changing underlying beliefs about, and approach to, entrepreneurship. To achieve and evaluate real transformation, this research proposed the Transformative Entrepreneurial Self-Efficacy (TESE) model.

Based on the findings above, the study made the following key recommendations.

1. If transformation in education is required, there is a need to increase experiential learning in entrepreneurship education.

2. Learning institutions that run entrepreneurship courses should establish relationships with successful entrepreneurs in their environment. They could then leverage that relationship by inviting those entrepreneurs to share their experiences. Learning institution should select entrepreneurs with demographics that are similar to the students.

3. Entrepreneurship programmes should be evaluated on their ability to bring about measurable changes in students.

Keywords: Critical reflection, disorienting dilemma, reflective discourse, transformation, transformative learning, entrepreneurial self-efficacy, entrepreneurial action, entrepreneurial orientation, individual entrepreneurial orientation, opportunity identification, managerial self-efficacy and TESE model.

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LIST OF ABBREVIATIONS

ABBREVIATIONS	EXPLANATION
ADSL	Asymmetric Digital Subscriber Line
ANOVA	One-way Analysis of Variance
CFA	Confirmatory Factor Analysis
EI	Entrepreneurial Intentions
EO	Entrepreneurial Orientation
ESE	Entrepreneurial Self-Efficacy
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
ICT	Information and Communications Technology
IEO	Individual Entrepreneurial Orientation
NDP	National Development Plan
OECD	Organisation for Economic Co-operation and Development
PIRLS	International Reading and Literacy Study
SALAR	Systemic Action Learning Action Research
SEDA	Small-Scale Development Agency
SHAPE	Shifting Hope, Activating Potential Entrepreneurship
SMART	Specific, Measurable, Attainable, Realistic and Time bound
SMMEs	Small, Medium and Micro-sized Enterprises
TEA	Total Entrepreneurial Activity
TESE	Transformative Entrepreneurial Self-Efficacy
TIMSS	Trends in Mathematics and Science Study
UIF	Unemployment insurance Fund
UK	United Kingdom
UKZN	University of KwaZulu Natal
VAT	Value Added Tax

CHAPTER 1 :
INTRODUCTION

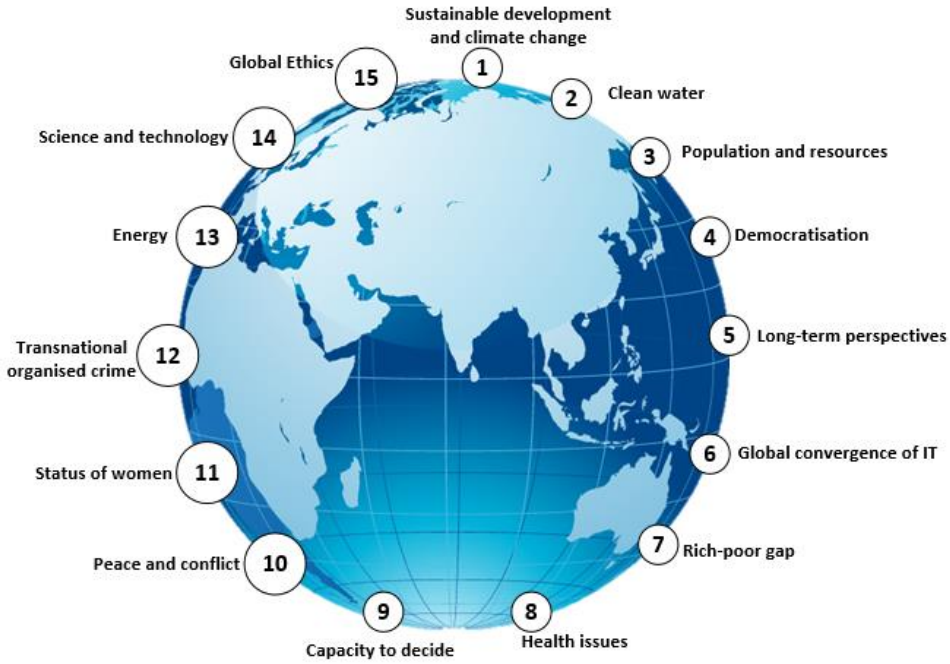
1.1 INTRODUCTION

This was a research study into developing youth entrepreneurial self-efficacy (ESE) using the transformative learning theory approach. The study commences by highlighting the national statistics of unemployment, which is 36.8% for expanded unemployment and even higher at 52.2% for youth broad unemployment (Statistics South Africa, 2017b). Accompanying this is the reality that 7.2% of households were victims of crime for the period 2015 to 2016 (Statistics South Africa, 2017c). The rationale of this study was that there is a negative relationship between employment and crime (Melick, 2003), a positive relationship between entrepreneurship and employment (Owualah, 1999) and also a positive relationship between education and entrepreneurship (Botha, Nieman and Van Vuuren, 2007; Do Paco, Ferreira, Raposo, Rodrigueus and Dinis, 2011; Hannon, 2006; Hisrich and Brush, 1986; Kojo Oseifuah, 2010; Roffe, 2010). The key theories that guided this research were the transformative learning theory and entrepreneurial self-efficacy (ESE). Conceptually the study proposes that to improve entrepreneurship metrics in South Africa, there is a need to increase ESE through transformative learning, which would lead to entrepreneurial action. The chapter closes with an outline of the thesis.

1.2 BACKGROUND

South Africa is experiencing high levels of expanded unemployment of 36.8%, characterised by an even higher level of youth expanded unemployment of 52.2% (Statistics South Africa, 2017b). This is at a backdrop of high level of crime where 7.2% of households are victims (Statistics South Africa, 2017c; Zinn, 2010). Sixty three percent (63%) of all criminal activity comprises house breaking, burglary and home robbery (Statistics South Africa, 2017c). One of the major drivers of crime being inequality and other structural economic factors such as poverty, unemployment and marginalisation (The Centre for the Study of Violence and Reconciliation, 2009). There is a positive relationship between unemployment and crime (Melick, 2003) and also between unemployment and instability (Hipp, 2010). This implies that reducing unemployment will reduce both crime, poverty and instability. Reducing unemployment, crime and poverty is in line with the 15 global challenges facing humanity as shown in Figure 1.1. below.

Figure 1.1: The Global Human Challenge



Source: Addendorf and Collier (2015: 4)

Several studies have proved that entrepreneurship is a viable way of reducing unemployment. For instance, a study by Owualah (1999) in Nigeria proved that promoting entrepreneurship was an effective way of reducing unemployment, as an average of four new jobs were created by each respondent in the first four years of a programme set to encourage entrepreneurship. A study by Faria, Cuestas and Mourelle (2010) revealed a bidirectional relationship between employment and entrepreneurship, albeit non-linear. These and numerous other studies prove that entrepreneurship is a viable means to escape poverty and hardship in South Africa (Amra, Hlatshwayo & Mcmillan, 2013; Callaghan and Venter, 2011).

This reality brings mostly cold comfort to South Africa, which significantly lags behind other African countries, such as Botswana, Cameroon and Morocco, in entrepreneurship measures, such as Total Entrepreneurial Activity (TEA) and Entrepreneurial Intentions (EI) (Herrington and Kew, 2016). South Africa is not short of entrepreneurship programmes in high schools, technical and vocational education and training colleges, technikons and at universities. The problem is that the existing programmes are not resulting in the transformation of student outcomes to higher TEA, higher entrepreneurial self-efficacy (ESE) or greater entrepreneurial intentions (EI) (Herrington and Kew, 2016; Shay and Wood, 2004). This is mostly because these programmes are generally theoretical with limited use of out of classroom activities (Radipere, 2012).

This study therefore set out to investigate ways in which to develop ESE in the youth using the transformative learning theory. Key terms pertinent to the study are briefly defined below.

- *Approach* is a systematic way of doing or looking at things based on certain beliefs, principles and ideas about the nature of learning (Doliente, 2014). An approach gives rise to the specific methods that can be followed to impart knowledge (Doliente, 2014). In this study, that approach is the transformative learning theory.

- *Developing ESE* means an approach to improving an individual's attitude towards entrepreneurship, which will enhance mastery of the same, through education training and other activities (Wilson, Kickul & Marlino, 2007; Shelton, 1990).
- *Entrepreneur Self-Efficacy (ESE)* is defined as the confidence in performing those tasks that relate to initiating and developing a new enterprise (Cambo, 2010).

- *Model:* means an illustration of concepts from a qualitative analysis, which us usually not yet proven to be a theory (Killam, 2013).

- *Transformative Learning* is "a deep, structural shift in basic premises of thought, feelings, and actions … that dramatically and irreversibly alters our way of being in the world" (Transformative Learning Centre, 2016). Transformation is also referred to as growth in developmental maturity (Fitch & O'Fallon, 2013:109).

1.3 RATIONALE

Existing research findings support the notion that there is a positive relationship between education and entrepreneurship (Botha et al., 2007; Do Paco et al., 2011; Hannon, 2006; Hisrich and Brush, 1986; Kojo Oseifuah, 2010; Roffe, 2010). Research undertaken in Sweden found that entrepreneurial training increased the long term probability of initiating a firm (Elert et al., 2015). In the United Kingdom (UK) entrepreneurship education even supports other career paths (Jones, Pickernell, Fisher & Netana, 2017) and in other places it provides insights into the feasibility of new business ideas (Kirkwood, Dwyer & Gray, 2014). The general benefits of entrepreneurship are that it provides a viable means to fight poverty and hardship (Amra et al., 2013; Callaghan and Venter, 2011) and increase employment (Owualah, 1999).

However, entrepreneurship education in South Africa is facing fundamental challenges. The Human Resources Development Council Technical Task Team (2013) recommended that South Africa should not introduce an entrepreneurial curriculum in South African schools due to the precarious nature of the South African schooling system. Research by Steenekamp (2013) found that entrepreneurship education in high school had no impact on entrepreneurial attitudes, entrepreneurial intentions, adaptive cognition and innovative skills for learners. At university level, a study by Mentoor and Friedrich (2007) found that academics resist introducing entrepreneurship as a distinct programme. Radipere (2012) argues that university entrepreneurship programmes are mostly academic and aimed at producing entrepreneurship programme graduates and not entrepreneurs. When Mentoor and Friedrich (2007) researched the student

outcomes of a university module taken over a semester, they found a statistically significant reduction in student innovation orientation and self-esteem orientation and no change in achievement orientation. The control group in that study indicated no change in the same variables. Van der Westhuizen (2016) holds that the emphasis of entrepreneurial education is on "How-to", which makes student more reactive and less proactive.

This study explored the transformative learning theory as a learning theory that can be used to inform the development and management of entrepreneurship programmes. In transformative learning the focus is on achieving a deep, structural shift in basic premises of thought, feelings and actions that change one's core assumptions (Transformative Learning Centre, 2016). This is closely related to Goleman's (2004:36) emotional aptitude which is "the meta-ability" to utilise all possible resources, including raw intelligence. If entrepreneurship training at least leads to transformative experiences where students are able to apply their entrepreneurial learning to relate to everyday life (Heddy and Pugh, 2015) then with time, transformative learning can occur. In practical terms, transformative learning would mean entrepreneurial programs are capable of moulding a student into an entrepreneur.

1.4 PROBLEM STATEMENT

The problem with South African entrepreneurship education and training is that it is overly theoretical and rarely uses out of class exercises such as internships, on-site-visits or community development (Radipere, 2012). The emphasis is on "How-to", which makes students more reactive and less proactive (Van der Westhuizen, 2016). This is notwithstanding the fact that students have positive perceptions of taking risks and managing risky situations (Van Der Westhuizen, 2017). In a study by Radipere (2012) (refer to section 2.10.5), it was found that in undergraduate entrepreneurship programmes only 2% included internships, 1% used small business consulting, 10% utilised on-site visits and 8% included community development. In light of these statistics, South African universities and technikons are producing entrepreneurship programme graduates rather than entrepreneurs (Jesselyn and Mitchell, 2006). This was documented in a study by Mentoor and Friedrich (2007), which found a decrease in self-esteem orientation and no change in achievement orientation after students had completed a semester studying an entrepreneurship module. It implies that if universities and technikons continue doing business as usual in entrepreneurship training, resources will continue to be wasted on every student who undergoes a programme that fails to inculcate positive entrepreneurial traits. There is a need to lead from the "future as it emerges", to innovate new responses, ideas and concepts (Van Der Westhuizen, 2018) if entrepreneurship education is to transform students to higher ESE and more entrepreneurial action outcomes.

The specific aspects of the problems under investigation are that there is no focus on increasing or improving the various elements of ESE. ESE affects individual entrepreneurial orientation (IEO), entrepreneurial intention (EI) and entrepreneurial action. ESE ultimately influences business performance (Glancey et al., 1998; Wickham, 2001). However, ESE is not a unitary measure but is

made up of four constructs, namely opportunity identification, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy (Barbosa et al., 2007). The issues concerning transforming these constructs of ESE are discussed in the sections that follow.

- **Opportunity Identification Self-Efficacy** is a key factor in entrepreneurship, as without opportunity identification there is no entrepreneurship (Karimi, Biemans, Lans, Chizari & Mulder, 2016). There is a need for every entrepreneurship training programme to focus on opportunity identification, either as a creation or discovery process (Karimi et al., 2016a). The efficacy of any entrepreneurial training is in its ability to enhance opportunity identification self-efficacy. Krueger Jr and Dickson (1994) found that people's attitude towards their ability to identify opportunities depended on what they were led to believe. Those individuals who received positive reinforcement about their competency saw more opportunities than those who were led to believe they were not particularly competent.

  People with different levels of risk aversion perceive opportunities differently (Barbosa et al., 2007). People with higher risk aversion tend to over-emphasise negative outcomes, while people with lower risk aversion over-estimate opportunities and under-estimate risks (Barbosa et al., 2007). In a study undertaken by Ucbasaran et al. (2008), it was found that the number of business opportunities that are identified and pursued depend on entrepreneurship-specific variables of human capital, as opposed to generic human capital variables (Ucbasaran et al., 2008).

  Opportunity identification is significant because those entrepreneurs who identify more opportunities are likely to pursue better quality opportunities based on the wider array of choices they see as being available to them (Ucbasaran et al., 2008). For successful pursuit of entrepreneurial opportunity, there should be a convergence of opportunity identification and intention (Karimi et al., 2016a; Foo et al., 2015). There is also a need to realise that although opportunities might be perceived in the blink of an eye, their development into something that can be pursued successfully takes time and effort (Foo et al., 2015). Due to the time needed to nurture and mature the opportunity, the role of affective activation should not be underestimated (Foo et al., 2015).

  As entrepreneurial training programs are largely run by academics in South Africa (Radipere, 2012) and are mostly reactive (Van der Westhuizen, 2016), the role of opportunity identification is likely under-emphasised. This is largely because most academics do not have the experience of what makes an opportunity attractive and potentially exploitable. They may even unwittingly suppress opportunity identification, which Krueger Jr and Dickson (1994) hypothesise is highly dependent on what people are led to believe about their own capabilities. There is a need for any entrepreneurial programme to emphasise that the more opportunities identified the better (Ucbasaran et al., 2008), and that the initiation of a successful business is a by-product of the

convergence of intention to exploit and opportunity identification (Karimi et al., 2016a; Foo et al., 2015). Theoretical courses that are ambivalent to opportunity identification self-efficacy are not optimally effective.

- **Relationship Self-Efficacy** is the perceived ability to develop relationships with others, especially investors and people who can provide finances for the business (Barbosa et al., 2007). Relationship self efficacy is similar to Cary and Goleman's (2001) relationship management which is the ability to adjust your emotion in order to be able to understand or influence the emotions of another person. Relationship self-efficacy in the sense of relationship management therefore build on skills such as self-management and social awareness (Cary and Goleman, 2001). There is broad agreement that an entrepreneur is embedded in a social network that provides the resources that are necessary for launching a business (Chen and He, 2011). Social networks refers to relationships with suppliers, customers, employees and providers of capital (McGee et al., 2009). The creation of an enterprise is the result of an interplay between social networks and cognition (De Carolis and Saparito, 2006). The social networks can be classified as utilitarian and infrequent (weak ties), or affect-laden and frequent (strong ties) (Nelson, 1989), both of which influence entrepreneurial behaviour (Chen and He, 2011). According to Chen and He (2011), strong affective relationships significantly influence individuals towards entrepreneurship, as they learn the traits that are relevant for success. Relationship self-efficacy is developed through transcending one's own abilities and ideas, being able to convince others and cultivating healthy business relationships (Van der Westhuizen, 2016). Developing these relationships exposes entrepreneurs to ideas other than their own way of thinking (Van der Westhuizen, 2016.)

  Teaching entrepreneurship in South Africa is mostly theoretical, with assessment by means of examinations, assignments, tests and business planning (Radipere, 2012). All these activities are largely solo efforts, with few opportunities for developing relationship self-efficacy. This is notwithstanding that most businesses fail, as not enough time is invested in building relationships with customers to understand their needs (Glauser and Holland, 2016). A large number of entrepreneurship students graduate without seeing the need to develop relationships, especially with people outside their comfort zone. Entrepreneurship courses need to teach students that to have a successful business, entrepreneurs need to nurture productive relationships with clients, investors, lenders and a number of other people with whom they would not ordinarily interact. This is similar to Senge's (1990) systems approach which argues that outcomes are more significantly influenced by the structure of the system, more than by individual intelligence.

- **Managerial Self-Efficacy** refers to the manager's belief that they can accomplish specific managerial tasks successfully (Peng et al., 2015). Managerial self-efficacy is important in

reducing the negative influences of work stressors (Peng et al., 2015), and should be a more relevant skill in the success of an entrepreneur, given the uncertainty associated with entrepreneurial ventures. Managerial self-efficacy is a good predictor of subsequent entrepreneurial performance (Mauer et al., 2017). In a study by Fast et al. (2014), it was found that people with low managerial self-efficacy were less likely to ask for input from employees and rated employees who spoke out negatively. This is notwithstanding the reality that encouraging employees to contribute ideas increases employee learning, ensures superior performance and leads to useful organisational change (Morrison et al., 2011). Entrepreneurs with low managerial self-efficacy feel personally threatened by employees who speak out (Fast et al., 2014). This fear leads the entrepreneur not to solicit or provide feedback, undermining of employees and there is an unwillingness to implement change (Fast et al., 2014).

In the South African context, entrepreneurship literature highlights the lack of managerial skills, experience and expertise as impediments to business survival and growth (Mbonyane and Ladzani, 2011). A study conducted by Mbonyane and Ladzani (2011) into survivalist, micro and small enterprises found that most businesses suffered from classic poor managerial outcomes such as a failure to obtain credit from financial institutions due to a lack of budgets or records, inability to manage finances, low mark-ups on products, poor stock control and legal requirements not being met. The significance of managerial self-efficacy is further highlighted by Bloom et al. (2010), who report that poor managerial practices are rampant, especially in developing countries. One of the leading causes of poor managerial practices is that people are simply unaware of the need for better business management (Bloom et al., 2010).

Increasing managerial self-efficacy boosts the chances of survival for entrepreneurial organisations. However, entrepreneurship courses are not specifically aimed at improving managerial self-efficacy. They teach the behaviours of entrepreneurship (Van der Westhuizen, 2016) with specific focus on developing business plans to be used to apply for financing. There is no concerted effort to impart managerial skills.

- **Tolerance Self-Efficacy** refers to the individual's ability to work productively with ambiguity, under pressure, stress, constant change and sometimes conflict (De Noble et al., 1999). Tolerance self-efficacy is especially important in an environment characterised by volatility, uncertainty, complexity and ambiguity which influence personal and business performance (Elkington, Van der Steege, Glick-Smith and Breen, 2017). Empirical research into risk aversion has found that people who are risk averse become employees and those with lower risk aversion become entrepreneurs (Hvide and Panos, 2014). Hvide and Panos (2014) also found that people who participate in the stock market and have higher levels of debt are more likely to become entrepreneurs. However, it should be noted that people are generally risk averse and avoid situations of extreme risk (Pihie and Akmaliah, 2009). Studies have found that the more

risk averse an individual, the less likely that individual is to initiate a business, but if they do start a business, they operate better performing companies (Hvide and Panos, 2014). In another study, Parry et al. (2014) found that entrepreneurs do not view themselves as less risk averse than non-entrepreneurs, only that they are more optimistic. However, in the same study, Parry et al. (2014) identified no significant changes in risk aversion for males but significant changes among females after one year of operating a business.

It should be highlighted that there have been mixed results as to whether females are more risk averse than males. A study by Byrnes et al. (1999) concluded that women are more risk averse than men (based on a meta-analysis of 150 studies). A more recent meta-analysis of literature by Nelson (2014) questions these results by highlighting a significant overlap of results. In addition, there is significant cultural pressure levelled against females to comply with certain stereotypical attitudes and responses (Nelson, 2014). Nelson (2014) highlights that a study into risk aversion for boys and girls in same-sex schools found no statistically significant difference between genders, while the level of risk aversion for boys and girls in integrated schools is significantly different.

Notwithstanding individuals' various levels of risk aversion, most entrepreneurial programmes do not evaluate these differences as part of the selection process. Where selection criteria are used, they are of a non-entrepreneurial nature, for example, academic achievement. This implies that people at different levels of entrepreneurial development are being taught the same things. The training programme, or course, is pitched inappropriately, leading to high variability in outcomes among students.

From the foregoing, it is apparent that entrepreneurship education in South Africa is overly theoretical (Radipere, 2012) with emphasis on the process of managing a business, which makes student more reactive and less proactive (Van der Westhuizen, 2016). The problem is that programmes are not resulting in higher TEA, higher entrepreneurial self-efficacy (ESE) or greater entrepreneurial intention (EI) (Herrington and Kew, 2016; Shay and Wood, 2004). There is a need to focus on developing the competencies, skills, aptitudes and values necessary to initiate entrepreneurial businesses (Jesselyn and Mitchell, 2006). The way in which teaching and learning occurs in South African schools must be transformed to accommodate the reality that entrepreneurship encompasses many different skills and is dominated by failure.

1.5 RESEARCH OBJECTIVE

This research aimed to evaluate student transformation after entrepreneurship training and to propose a model for transformative learning that can be applied to develop elements of ESE, namely opportunity identification self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

1.6 HYPOTHESIS

A hypothesis is a testable expectation of reality that follows from a more general proposition (Babbie, 2015). The following are the hypotheses being tested by this research:

1.6.1 Null Hypothesis

H^0: There is no significant change in a participant's **entrepreneurial self-efficacy** (ESE) due to **transformative learning** following his/ her attending the SHAPE training programme.

1.6.2 Alternative Hypotheses

$H^{1:}$ There is a significant change in participants' **entrepreneurial self-efficacy** (ESE) due to **disorienting dilemma** following his/ her attending the SHAPE training program.

H^2: There is a significant change in participants' **entrepreneurial self-efficacy** (ESE) due to **critical reflection** following his/ her attending the SHAPE training workshop.

H^3: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **reflective discourse** following his/ her attending the SHAPE training workshop.

H^4: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **action** following his/ her attending the SHAPE training workshop.

1.7 RESEARCH QUESTIONS AND GOALS

A research question is important in any study as it helps guide the design, population and is critical in determining what data needs to be collected and analysed (Farrugia, Petrisor, Farrokhyar & Bhandari,, 2010). In light of this, the following are the research questions and goals:

1.7.1 Research Question and Goals 1

RESEARCH QUESTION 1: To what extent does disorienting dilemmas (significant experiences) develop ESE?

RESEARCH GOALS:

A. To determine if disorienting dilemmas (significant experiences) develop opportunity identification self-efficacy.

B. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's relationship self-efficacy.

C. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's managerial self-efficacy.

D. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's tolerance self-efficacy.

1.7.2 Research Question and Goals 2

RESEARCH QUESTION 2: To what extent does critical reflection develop ESE?

RESEARCH GOALS:

A. To determine if critical reflection develops opportunity identification self-efficacy.

B. To determine if critical reflection develops relationship self-efficacy.

C. To determine if critical reflection develops managerial self-efficacy.

D. To determine if critical reflection develops tolerance self-efficacy.

1.7.3 Research Question and Goals 3

RESEARCH QUESTION 3: To what extent does reflective discourse develop ESE?

RESEARCH GOALS:

A. To determine if reflective discourse develops opportunity identification self-efficacy.

B. To determine if reflective discourse develops relationship self-efficacy.

C. To determine if reflective discourse develops managerial self-efficacy.

D. To determine if reflective discourse develops tolerance self-efficacy.

1.7.4 Research Question and Goals 4

RESEARCH QUESTION 4: To what extent does action develop entrepreneurial self-efficacy?

RESEARCH GOALS:

A. To determine if action develops opportunity identification self-efficacy.

B. To determine if action develops relationship self-efficacy.

C. To determine if action develops managerial self-efficacy.

D. To determine if action develops tolerance self-efficacy.

1.8 SIGNIFICANCE OF THE STUDY

The study proposes a new Transformative Entrepreneurial Self-Efficacy Model (TESE Model) that builds on the transformative learning and ESE theories. The TESE model (section 7.5.) provides a critical pathway a student can follow in order to be transformed from low ESE to a point where he or she is confident enough to take entrepreneurial action. The significance of this study can therefore be split into its contribution to theory and its contribution to practice. The significance and relevance of this study are summarised below, with a detailed discussion in section 7.5.

1.8.1 Contribution to Theory

This study explores entrepreneurship training through the lens of transformative learning. It places transformation from student to entrepreneur at the core of entrepreneurship training. This is an important focus, especially in South Africa which is plagued by crime and high youth unemployment (Statistics South Africa, 2017c; Zinn, 2010).

The study also proposes that training of entrepreneurs should focus on the specific dimensions of ESE, namely opportunity recognition self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy (refer to section 7.5). This would bring coherence and focus to the training, underpinned by solid entrepreneurial theory. This is contrary to the current education and training approaches which focus on teaching the process of entrepreneurship (Van der Westhuizen, 2016).

Current entrepreneurial literature is dominated by models and stories of successful entrepreneurs. This is notwithstanding the reality that the majority of entrepreneurs fail (Burger, 2016). The contribution to the body of knowledge of this study, through the TESE model, is that there is also a need to study/ interview failed entrepreneurs (refer to section 7.5).

The study further highlights that transformative learning is not a destination, it is an ongoing life journey. Transforming underlying assumptions and beliefs should not end when reflective discourse ends. Entrepreneurs should keep shining a light on those premises and beliefs that may have been useful in the past but are no longer relevant and could lead to business failure.

1.8.2 Contribution to Practice

On the practical side, the study provides a model that can be used to develop an entrepreneurship training programme (refer to section 7.5). Firstly, the model advances a step by step process to ascertain a person's current stage of transformation. This guides trainers in designing suitable programmes with relevant topics to prepare their trainees to launch new businesses.

The second practical contribution is emphasising the significance of evaluating if the trainees are ideally suited to participate in the training programme. This is based on the reality that entrepreneurship students come to the programme with varying levels of ESE, entrepreneurial skills and levels of education.

The third contribution to practice is that this study specifies that critical reflection can be accomplished through guided journaling and guided meditation. The guidance to meditation and journaling should be based on elements of ESE.

The fourth contribution of this study to practice is that it provides a guide to what topics need to be covered by entrepreneurship training. This assists a trainer to narrow the resources needed to complete the programme.

While entrepreneurship literature recommends site visits to businesses, this study takes this a step further by recommending that entrepreneurship students should also interview failed entrepreneurs. The aim of interviewing entrepreneurs who failed is to provide a balanced perspective and thus preparing students to avoid possible future failures.

A final key contribution is that this study recommends prototyping and testing an idea as part of a training programme. Testing is accomplished by interviewing potential customers or running advertisements on platforms such as Gumtree, Google AdWords or Facebook. This introduces students to testing ideas and assumptions as a means of overcoming the pitfalls of venture creation (Glauser and Holland, 2016).

1.9 THEORETICAL FRAMEWORK

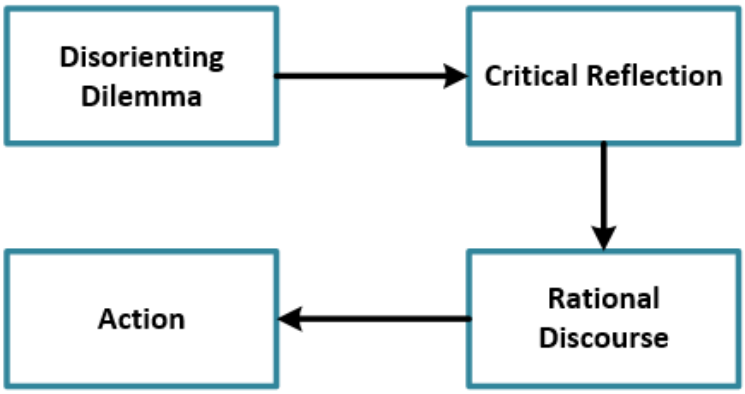
This research is underpinned by two theories, namely Transformative Learning Theory and Entrepreneurial Self Efficacy (ESE). Transformative learning theory, being about achieving significant change in a person's world view, while ESE is the confidence that a person has to undertake entrepreneurial actions. These theories are detailed below.

1.9.1 Transformative Learning Theory

The transformative learning theory was originally proposed by Mezirow and Marsick (1978) after a study of women returning to college in the United States after a long hiatus. The theory proposes that, unlike in the learning of children, adults attempt to fit all new information into existing meaning schemes and rejecting that which does not fit (Taylor, 2017). Unfortunately, adults are significantly influenced by meaning schemes often acquired uncritically during childhood (through socialisation and acculturation) and distort thought processes, which in turn influences the way they behave (Mezirow, 1991). People have causal assumptions that are often 'ingrained and well-rehearsed' (Christie et al., 2015) and there is a need to transform those underlying assumptions to enable them to learn.

Transformative learning is "a deep, structural shift in basic premises of thought, feelings, and actions … that dramatically and irreversibly alters our way of being in the world" (Transformative Learning Centre, 2016). Transformative learning theory is underpinned by four main stages, namely disorienting dilemma, critical reflection, rational discourse and action (Kitchenham, 2008). This process is illustrated in Figure 1.2.

Figure 1.2.: Transformative Learning Cycle



Source: Adapted from Theeboom et al. (2014)

Transformation begins with a measure of disorientation, which can be a life crisis (Mälkki, 2012), or through a growing sense of dissatisfaction with one's situation in life (Mälkki, 2012; Nohl, 2015; Roberts, 2013). The next step is when one questions assumptions about oneself, one's cultural systems, feelings or disposition (Merriam, 2004), usually arising from perceived contradictions with reality (Kitchenham, 2008). The questioning of own assumptions is followed by tapping into the "collective experience" through reflective discourse (Mezirow, 2000b). To participate in this discourse, a person needs to "find their own voice" (Mezirow, 2000b) and be emotionally intelligent (Goleman, 1998). The essence of transformative learning is the need to take action (Kitchenham, 2008).

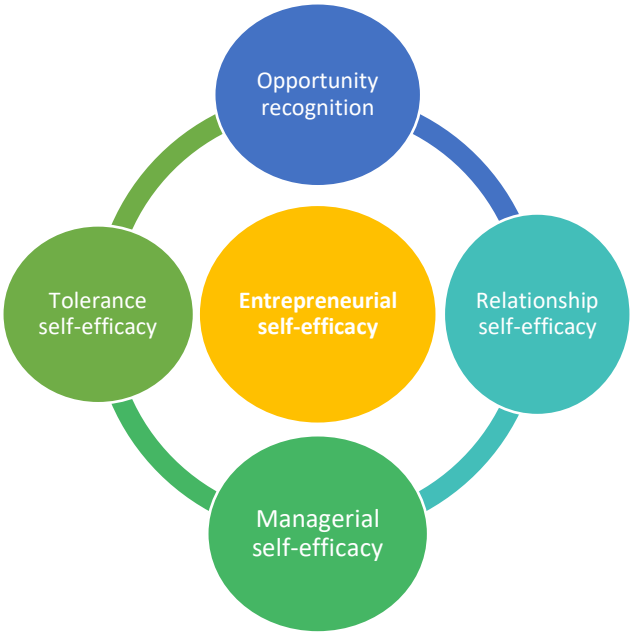
The transformative learning theory was selected as it is has been known for more than 35 years and has received significant attention and discussion (Dirkx, 2012; Hoggan, 2016; Newman, 2014; Taylor, 2007; Taylor and Cranton, 2012; Transformative Learning Centre, 2016). Transformative learning offers scope in entrepreneurship training, where acquired knowledge needs to be more than remembered but also converted into action. The theory also provides a theoretical framework to investigate the way in which to change attitudes and behaviour in light of a strong influence of culture and background, which instil beliefs into an uncritical childhood mind (Mezirow, 1991). The attitudes and beliefs influence ESE, which is an antecedent to entrepreneurial action.

1.9.2 Entrepreneurial -Self-Efficacy (ESE)

In general, self-efficacy is a person's estimate of his or her ''capabilities to mobilise the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives'' (Wood and Bandura, 1989). As self-efficacy is domain specific (Eccles, 1994), entrepreneurial self-efficacy

(ESE) is defined by Cambo (2010) as the confidence in performing those tasks that relate to the initiation and development of new enterprises. The constructs that make up ESE vary slightly according to various scholars but the key constructs postulated by Barbosa et al. (2007) are shown in Figure 1.3. below.

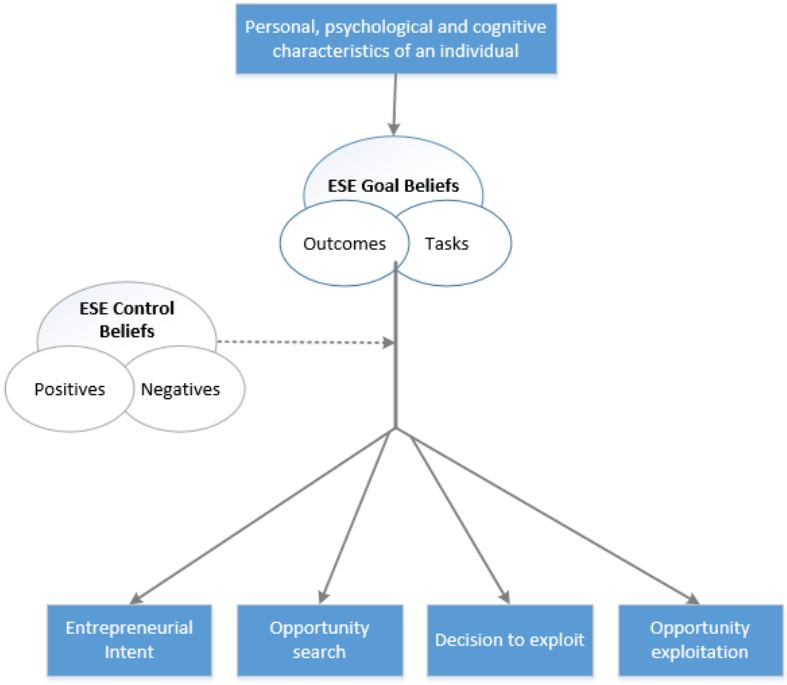
Figure 1.3: Entrepreneurial Self-Efficacy - Main Constructs



Source: Adapted from Van der Westhuizen (2016)

Studying ESE is important, as people with higher ESE and entrepreneurial intentions have a higher probability of being involved in entrepreneurial activities (Boyd and Vozikis, 1994). The higher likelihood for entrepreneurial involvement is illustrated in Figure 1.4. below.

Figure 1.4: The Role of ESE for the Business Start-Up Process



Source: Wincent (2010:338)

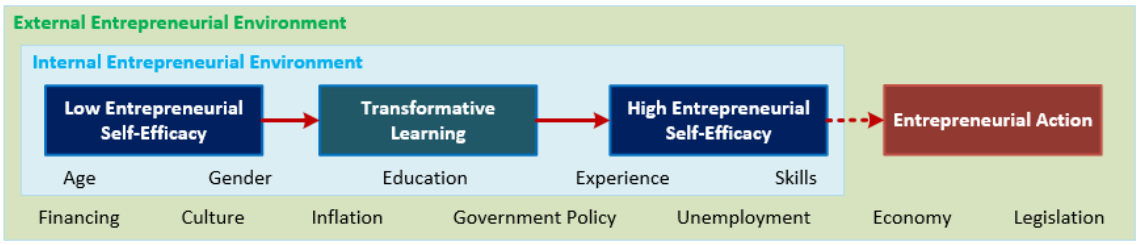
The figure above shows that personal characteristics influence ESE, which in turn influences important entrepreneurial trait such as entrepreneurial intent, opportunity search, decision to exploit and opportunity exploitation. ESE was selected for this research because various studies assert that ESE can be increased through training (Florin et al., 2007; McGee et al., 2009; Wilson et al., 2007). An increase in ESE is associated with more likelihood of taking entrepreneurial action (De Jong and Jeroen, 2013).

1.10 CONCEPTUAL FRAMEWORK

The South African entrepreneurial environment is plagued by numerous negative entrepreneurship metrics. For instance, a low established ownership rate of 2.5% (Global Entrepreneurship Monitor, 2017), low total entrepreneurial activity (TEA) (Herrington and Kew, 2016), complex and burdensome legislation (SBP, 2014) and a high rate of business failure (Fatoki and Garwe, 2010; Friedrich, 2016). Negative metrics contribute to creating a challenging external environment with which the entrepreneur must grapple, thus lowering opportunity perception. For example, opportunity perception decreased from 40.9% in 2015 to 35% in 2016 (Herrington et al., 2017). The above factors lead to low entrepreneurial self-efficacy (ESE).

There is a need to transform low ESE through transformative learning. In terms of transformative learning, transformation implies a change in meaning schemes (Mezirow and Marsick, 1978). This study utilised the transformative learning theory as the process that adult entrepreneurship students must undergo in order to become successful entrepreneurs (Kegan, 2000). Students have to change the form that makes meaning, that is, own epistemologies (Kegan, 2000), in order to increase their ESE. Only then can an increased likelihood of entrepreneurial start-up action be expected. The transformation is illustrated in Figure 1.5. below.

Figure 1.5: The Role of ESE in the Business Start-Up Process



Source: Own compilation from literature

In line with Figure 1.5., a person has to transcend their internal entrepreneurial environment in order to more effectively deal with the external entrepreneurial environment over which they have limited or no control. This study proposes a way to transcend personal limitation characterised by low ESE to a level where the student feels sufficiently competent to deal with the external environment.

1.11 DELIMITATION OF STUDY

A non-probability sampling strategy was selected because of the nature of the research that was undertaken. For a truly random sample to be selected, the characteristics of the entire population for the research must be known (Marshall, 1996) and have an equal chance of being selected (Sekaran and Bougie, 2010). This was not possible for this study, as it was action research investigating a group of participants who responded to an advertisement for the SHAPE programme. By responding to the advertisement students self-selected, which could mean they are dissimilar to those students who might have seen the advertisement and chose not to respond. Although the results will have limited generalisability due to a non-probabilistic design (Ecker et al., 2015; Wright, 2005), the study makes a significant contribution to both the theory and practice of entrepreneurship.

1.12 LIMITATIONS

The limitations for this study are discussed in section 5.14. However, in summary, this research involves the study of the SHAPE programme for which participants volunteered. Self-selection bias and non-probability sampling techniques led to a limitation in the generalisability of the results (Asthana and Braj, 2016).

Only one entrepreneurship programme was studied due to limited resources and this also limited the generalisability of the results. The one study however fulfilled the research objectives because the programme studied followed the generic approach (best practice) currently used by universities. This means the programme can be seen as representative of many other entrepreneurial programmes. Other limitations discussed in section 5.14 include task exhaustion and the pressure respondents feel to demonstrate improvement, especially after 13 weeks of attending a programme.

1.13 CHAPTER OUTLINE

The following chapter outline was carefully selected following an extensive literature review and begins with an overview of the research in Chapter 1. The overview is followed by in depth discussion of entrepreneurship and ESE in Chapters 2 and 3. Chapter 4 is an exposition of the different learning theories with specific reference to the Transformative Learning Theory. All the Chapters are summarised below as follows:

Chapter 1 – Introduction: Chapter 1 provided an overview of the research. The background, rationale and problem statement, highlighting why this research is necessary in the current social and economic climate. The research questions, objectives and hypotheses discuss what the research attempts to achieve based on specified assumptions and propositions. Chapter 1 also summarised contributions to both body of knowledge and practice of entrepreneurship. The theoretical and conceptual frameworks provide underlying theories used and fundamental assumptions employed in the study. It then discusses

sampling strategies under delimitations of study which sets the stage for a brief discussion of study limitations.

Chapter 2- Entrepreneurship theory in the South African environment: Chapter 2 describes the context and environment in which the study was undertaken. With South Africa's excessive levels of unemployment and crime, the need exists to appreciate that entrepreneurship is a key part of the South African economy in a society that successfully negotiated its way out of "a strife-ridden past characterised by institutionalised racial divide" (Sisk, 2017:11). The chapter discusses entrepreneurship in general and the way in which the South African environment affects entrepreneurship. It is important to understand the environment in which the study occurred, as such environment has a significant impact on the participants and programmes.

Chapter 3 - Positioning Entrepreneurial Self-Efficacy in an Entrepreneurship Theoretical Framework: The position of ESE in the entrepreneurship literature is argued in chapter 3. There are brief discussions of entrepreneurial orientation, individual entrepreneurial orientation and entrepreneurial intentions as they relate to ESE. Self-efficacy, ESE and factors that influence ESE are explored at length. Hofstede's (1980) cultural dimensions are used to explore culture as one of the influencers of ESE. The chapter closes by arguing that, although ESE is a stable construct (Chen et al., 1998), there are ways to increase it in an individual.

Chapter 4 – Learning and Transformative Learning: The ten theories of learning in order to indicate the way in which transformative learning relates to other learning theories forms the central theme in chapter 4. It then presents the transformative learning process, especially the four key transformative learning stages, namely disorienting dilemma, critical reflection, rational discourse and action. To balance the discussion, key criticisms of transformative learning are also presented. The chapter then provides the four types of transformation discussed by Taylor (2008) followed by a summary of a typology according to Hoggan (2016), which can be used to gauge transformation. Understanding learning theories is vital in order to propose a learning model that incorporates the latest knowledge base.

Chapter 5 – Research Methodology: This chapter presents a discussion of several research concepts including those followed by this study. Various research designs are discussed, as well as a longitudinal research design that was selected for this study. This is followed by a discussion of aspects of research, such as research methodology, paradigms, study site, population and sampling and data collection methods. The quality of the data was ensured by testing for reliability and validity. To ensure validity, Cronbach's alpha was used in line with a recommendation by Rockinson-Szapkiw (2017). Data analysis techniques are then discussed along with ethical considerations and limitations of the study. A discussion of the pilot study results from **t**wenty (20) respondents who completed the questionnaire follows. The questions' reliability was measured using Cronbach's alpha co-efficient and most of the questions

loaded to a significant and expectable extent as argued by Kline (2011) and Hair, Black, and Anderson (2014).

Chapter 6 – Research Results and Discussion: In this chapter the data from the longitudinal study is analysed. First, there is a discussion of reliability followed by tests of normality. This is followed by an analysis of demographic factors such as race, gender and age. Changes in ESE for each transformative learning factor are analysed and discussed, followed by analyses and discussions of personal factors. The hypothesis was tested using One-way Analysis of Variance (ANOVA), which indicated that there was a statistically significant improvement in ESE that can be attributed to the training program.

Chapter 7 – Conclusion: In this concluding chapter, the overall purpose of this study and the findings are discussed and briefly compared to previous research. It then summarises what each chapter sought to achieve and why. In light of research results and discussion, a new TESE model is proposed that seeks to illustrate the way in which youth ESE can be transformed through a three stage experiential transformational training process. This leads to a discussion of the way in which this research contributes to both the theory and practice of entrepreneurship. The chapter concludes with recommendations for what could be undertaken at a practical level to transform entrepreneurship students to entrepreneurs.

1.14 CONCLUSION

This chapter introduced a background to the study, highlighting the high levels of unemployment among the youth, 52.2% (Statistics South Africa, 2017b) and that 7.2% of households are victims of crime in South Africa (Statistics South Africa, 2017c). The major drivers of crime being inequality, poverty, unemployment and marginalisation (The Centre for the Study of Violence and Reconciliation, 2009). It then provides the rationale for the study that entrepreneurship education and training can be used to fight these ills, in line with previous research (Botha et al., 2007; Do Paco et al., 2011; Hannon, 2006; Hisrich and Brush, 1986; Kojo Oseifuah, 2010; Roffe, 2010). The problem statement, research objectives, hypothesis and questions are provided followed by a summary of the significance of this study. It is then argued that South Africa's sub-standard entrepreneurship metrics could be improved by increasing ESE through transformative learning. The limitations of the study are discussed. This sets the tone for a detailed literature review of entrepreneurship and the South African entrepreneurial environment. Chapter 2 presents a context and environment in which the study of transforming ESE is undertaken.

CHAPTER 2 :
ENTREPRENEURSHIP THEORY AND THE SOUTH AFRICAN ENVIRONMENT

2.1 INTRODUCTION

To propose an approach to transform the youth's entrepreneurial self-efficacy (ESE), one needs to understand the context and environment in which youths globally operate. There is a need to appreciate that entrepreneurship is the backbone in a society plagued by the detrimental and protracted after-effects of apartheid South Africa (Sisk, 2017), The South African economy has recently become the largest in Africa, overtaking Nigeria, not due to GDP growth but due to currency valuation (Rossouw, 2016). Yet South Africa is a country bedevilled by high unemployment of college leaving youth (20–24 years of age) estimated at 52.2% (Statistics South Africa, 2016). After reviewing several definitions of entrepreneurship, this research settled on a more simplistic definition as owning or running your own small business (The Economist, 2014). Several economic theories of entrepreneurship (Chicago, German and Austrian tradition), are analysed, followed by the Push and Pull Entrepreneurship Theory (Dawson and Henley, 2012), Leibenstein's X- efficiency (Leibenstein, 1966) and Shackle Theory (Shackle, 1983). This chapter then evaluates two entrepreneurship processes, namely the Lean Start-up Process (Blank, 2013) and the Classical Approach (Hisrich et al., 2005; Nieman and Bennett, 2006). Several personal factors that affect entrepreneurship are discussed and it is shown that South Africa's Total Entrepreneurship Activity (TEA) is 2.5 times below the average among participating countries (Herrington et al., 2017). Added to low TEA, the failure rate of entrepreneurial businesses is as high as 5 out of 7 failing in the first year (Burger, 2016). Despite significant efforts by the government, universities and non-governmental organisations, the entrepreneurial metrics and environment remain negative.

2.2 ORGANISING MODEL

In order to provide a background to entrepreneurship and the South African environment, this chapter uses an organising model as depicted in Figure 2.1. This model indicates the way in which ESE is positioned in the South African entrepreneurial environment. The model proposes that ESE occurs in a broader entrepreneurial theory and is influenced by the South African macro environment (refer to Figure 2.1.). As shown in Figure 2.1 all this interweaves to influence entrepreneurial self-efficacy and entrepreneurial action, which are the primary purposes of this research.

Figure 2.1: Chapter 2 Organising Model

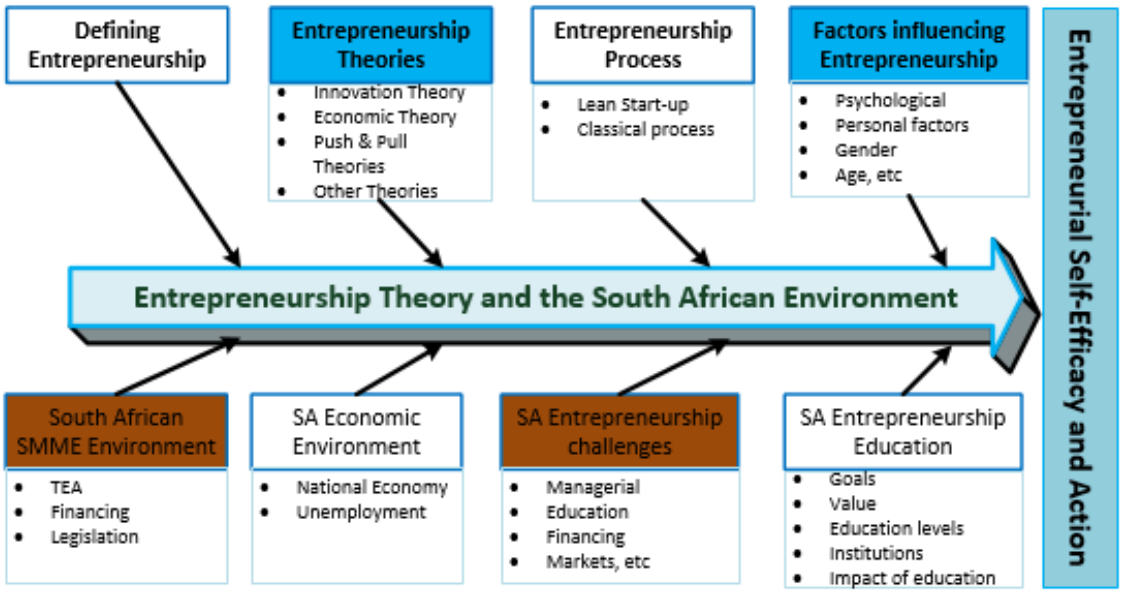


Figure 2.1 above indicates that there are various entrepreneurship theories (section 2.6.) that influence the way entrepreneurship is defined and viewed (section 2.5.). There are also a number of personal factors that influence whether or not a person is entrepreneurial (section 2.8.) and there are two ways of initiating a business (section 2.7.). All this is occurring in the South African environment, which is characterised by high unemployment of youth (section 2.4.) and low total entrepreneurial action (section 2.9). The organising model depicted in Figure 2.1 is what guides the flow of this chapter. The next section explores the South African economic environment and the manner in which it influences entrepreneurship.

2.3 SOUTH AFRICAN ECONOMIC ENVIRONMENT

To understand ESE and the transformative learning of youth in the South African society and economy, one must appreciate that despite its political, economic and social challenges, it escaped the conflict and collapse which bedevil countries with entrenched governments sponsoring ethnic and racial divide (Sisk, 2017). The negotiation in South Africa from a conflict ridden past coincided with the end of the Cold War in the late 1980s which led to the collapse of the Berlin Wall. The post-war era was characterised by economic super powers demonstrating less and less interest in nation-building (Sisk, 2017).

Despite managing to get rid of apartheid peacefully, unemployment remains high, settlement structures are remote from economic centres, barriers to enter the market remain high for entrepreneurs, economic growth has slowed down and the regulatory environment is slowing down job creation (OECD, 2015). Notwithstanding these challenges, the World Bank (2017b) posits that the South African transition into democracy was one of the "most remarkable political feats in the past century".

In 2016 the South African economy became the largest economy in Africa again, overtaking Nigeria at $301 billion vs Nigeria's $296 billion. However, this was not a result of any improvement in actual gross domestic product but a change in currency values (Rossouw, 2016). According to Rossouw (2016), the prospects for South Africa were negative, as people were expected to become poorer on a per capita basis for years 2017 and 2018.

According to Rossouw (2016), the projection is unfolding as expected, with GDP contracting by 0.7% in the first quarter of 2017 (Statistics South Africa, 2017a). Leading the contraction in GDP was petroleum, chemical products, rubber and plastics (Statistics South Africa, 2017a). The contraction in the economy does not bode well for employment figures, as discussed in section 2.4 below. The contraction in the economy is in contrast to the optimistic GDP projection for 2017 and 2018 by The World Bank (2017b), which predicted a 1.1% growth in GDP in 2017 and 1.8% in 2018.

To understand what influences entrepreneurial learning and ESE, one must appreciate that the South African economy is unique with its own peculiarities. For instance, Fedderke (2014) reports that although South Africa is a developing country, it has the characteristics of a developed country. This is evidenced by a disproportionate contribution of the services sector to GDP against the backdrop of an industrial sector that is stuck in long term decline (Fedderke, 2014). In 2016 services were estimated to contribute approximately 68.7% to GDP, while industry contributed 29.2% and agriculture a low 2.2%. This is significantly above African and other developing countries' average contribution of the service sector, with sub-Saharan Africa at 58%, China 43% and India 56% (World Bank, 2012).

Groepe (2015) estimates that small, medium and micro enterprises contribute 52% to 57% of GDP in South Africa. The growth of SMMEs from 2008 has been marginal, growing by only 3% between 2008 and 2015 (Bureau for Economic Research, 2016) against a backdrop of a GDP that grew by 14% during the same period (Bureau for Economic Research, 2016). Based on the statistics presented above; of marginal growth of SMMEs, an economy growing slower than similar economies, it is not surprise that labour participation and employment rates are poor, as discussed in the next section.

2.4 EMPLOYMENT AND LABOUR PARTICIPATION

Exploring employment and labour participation is a key part for the study of transformative learning of entrepreneurs and ESE, as it highlights the realities experienced by people. According to Groepe (2015), approximately 60% of employed South Africans are employed by SMMEs. The National Development Plan (NDP) projects that at least 90% of all new jobs will be created by small and expanding businesses by 2030 (Groepe, 2015). The claim of a 60% contribution to total employment is, however, questioned by Timm (2017) quoting Neil Rankin, who postulates that Statistics South Africa's estimates regarding contribution of SMMEs could be an over-estimation. Notwithstanding the disputed estimation, what is beyond dispute is that SMMEs make a significant contribution to present and future employment in South Africa.

The unemployment rate in South Africa reached its highest level since 2003 in the first quarter of 2017, reaching 27.7% (Statistics South Africa, 2017a). Although the number of employed people increased on a year to year basis, the overall unemployment percentage was driven by 433,000 job seekers who joined the labour market, mostly youth aged between 15 and 34 years of age (Statistics South Africa, 2017a). Expanded unemployment, which includes discouraged people who no longer actively seek work, also increased to 36.4%, translating to approximately 9.3 million economically active people who were unemployed in the first quarter of 2017 (Statistics South Africa, 2017a).

Youth unemployment is on the rise in South Africa. The South African youth (15 - 34 years old) participation rate in the economically active population between the second quarter of 2008 and the second quarter of 2016 decreased from 52.5% to 48.6% (Statistics South Africa, 2016). The statistics translate to a 7.4% reduction in the participation of youth in sustained economic activities. A comparison of youth (15 - 34 years) unemployment during the same period indicates an increase from 32.1% in 2008 to 37.5% in 2016 (7.6 million youths) (Statistics South Africa, 2016). This translates to a 16.8% increase in unemployment among this group. The unemployment rate for college leaving youths (20 – 24 years) is 52.2% (Statistics South Africa, 2016). The Global Entrepreneurship Monitor (2017:681) reports a higher youth unemployment of 65%, although the facts are not statistically and empirically grounded. What is beyond dispute, is that the level of unemployment is increasing. The implication is that the policy discussions and interventions by the government during the past seven years have not produced the desired results (Graham and Mlatsheni, 2015).

The level of education and age play a decisive role in the likelihood of being employed in South Africa. The unemployment rate for people with less than matric was 33.1%, while graduate unemployment remained at 7.3% in the first quarter of 2017 (Statistics South Africa, 2017a). Young people are most affected by unemployment, as the South African economy is in substantial demand for highly skilled employees since the shift to higher productivity and technology-led growth in the late 1990s and early 2000s (Graham and Mlatsheni, 2015).

The level of unemployment creates a reality that entrepreneurship is a viable "means to escape impoverishment and survivalist conditions" in South Africa for a significant portion of the population (Amra, Hlatshwayo and Mcmillan, 2013; Callaghan and Venter, 2011). There is a definite need to increase entrepreneurship and success of entrepreneurial organisations, as this is closely linked to reducing unemployment and thus alleviate poverty (Chun-Mei and Hsi-Chi, 2011; Kollmann et al., 2007; Bureau for Economic Research, 2016). Herrington and Kew (2016) hold that a major focus of development strategies in South Africa has been inclusive growth to reduce poverty. Key to that has been a focus on SMMEs.

Herrington and Kew (2016) report that in 2015 entrepreneurs were approximately four times more likely to expect to employ people other than themselves in the next 5 years, compared to 2013. In providing further insight into this development, Herrington and Kew (2016) argue that this should be

contextualised in the reality of a dearth of skilled manpower, rigid labour regulation and an increase in necessity-driven entrepreneurs. However, Choto et al. (2014) argue against this last point. According to their research, necessity-driven entrepreneurs are also driven by the desire to grow. Notwithstanding the desire for growth, Rankin et al. (2013) report a worrying trend in South Africa since 2000 where the proportion of people employed in small firms (businesses employing fewer than 50 people) has been shrinking. This is contrary to the world trend, where SMMEs are accounting for a rising percentage of employment (Rankin et al., 2013). The declining of employment figures in South Africa calls for a better understanding of entrepreneurship, which if the focus of the next section.

2.5 DEFINING ENTREPRENEURSHIP

Before delving deeper into the subject of the transformative learning of entrepreneurs, it is important to explore the different definitions of entrepreneurship and then highlight the definition this study followed. According to Gutterman (2003), entrepreneurial research has been unduly complicated by the lack of a consistent definition of the term. Many researchers have focused on the economic contribution of entrepreneurship (Gutterman, 2003). One of the early definitions of entrepreneurship was by Schumpeter (The Economist, 2014), who emphasised entrepreneurs as innovators who convert their unique ideas into companies. An alternative, yet more popular definition of entrepreneurship considers small business ownership, running one's own company and being self-employed (The Economist, 2014). Other definitions of entrepreneurship list the traits and life experiences of entrepreneurs in an attempt to expose entrepreneurial characteristics (Gutterman, 2003). A number of researchers of the subject have come to the conclusion that the definition of entrepreneurship is elusive and different people have different perceptions (Gutterman, 2003; Sexton et al., 1986). Notwithstanding the mentioned elusiveness, definitions of entrepreneurship can be classified into process approach, outcome approach and mind-set approach.

Using a process approach definition, Van Aardt and Bezuidenhout (2014) posited that entrepreneurship is initiating, creating, building and expanding a venture with an entrepreneurial team and gathering resources to exploit an opportunity in the entrepreneurial environment. Similarly, Rwigema and Venter (2004) offer a multi-step definition of entrepreneurship as a process of conceptualising, organising, launching and nurturing a business into a potentially high-growth venture.

Entrepreneurship can also be defined from a mind-set perspective. Timmons and Spinelli (2007) state that entrepreneurship is a mind-set oriented towards thinking, reasoning and acting to exploit an opportunity.

Using outcome orientation, entrepreneurship can be defined simply as the creation of a new business under conditions of risk and uncertainty (Burger et al., 2005; Zimmerer et al., 2007). Zimmerer et al. (2007) defines entrepreneurship as a systematic and disciplined way of applying innovation and

creativity to the opportunities and needs of the market. In short, creating strategies to exploit market gaps using new products or services.

This research followed the popular simplistic definition of entrepreneurship as small business ownership, running one's own company and being self-employed (The Economist, 2014). This simplistic definition was deemed sufficient for the purposes of this study, notwithstanding the reality that such a definition can produce unintended results, especially when comparing entrepreneurship in different economies (The Economist, 2014). As a natural progression, setting the groundwork for studying entrepreneurial ESE development using transformative learning, there is a need to explore the various theories of entrepreneurship.

2.6 ENTREPRENEURSHIP THEORIES

As implied in the multiple definitions of entrepreneurship, it is apparent that there are various theoretical perspectives that form the basis of the discussed definitions. It is important to understand the underlying theories guiding entrepreneurship within the concept of transformative learning. The theories can provide further insight into relevant actions that can be taken to achieve the desired transformation. Entrepreneurship theories can be classified into Entrepreneurship Innovation Theory (pioneered by Joseph Schumpeter), Economic Theories, Push and Pull Theories and other theories by (Leibenstein, 1966) and Shackle (1983). Firstly, entrepreneurship innovation theory.

2.6.1 Entrepreneurship Innovation Theory

The Entrepreneurship Innovation Theory approach places the entrepreneur in the background of innovation (Hagedoorn, 1996). In Schumpeter's theorising, the entrepreneur is an agent of change and innovation (Hagedoorn, 1996). According to Schumpeter, the entrepreneur is extraordinary and brings about extraordinary outcomes, such as new technological possibilities, changes convention and removes production constraints (Deakins and Freel, 2009). In entrepreneurship innovation theory, the issue of innovation is described in light of the economic theory of equilibrium (Hagedoorn, 1996). The economy in perfect competition is prevented from remaining in equilibrium for extended periods due to entrepreneurial innovation which disturbs the equilibrium through rent seeking behaviour (Wong, Ho and Autio, 2005). Innovation can take on various forms. For instance, Johnson (2001) contend that innovation could involve creating a brand new product, changing the application of a product from its original use, changing the target market of a product, changing the way in which a product is delivered to the market and offering the same product using a completely different business model. The innovation approach to entrepreneurship propounds that an entrepreneur must be at the centre of any of these cited innovations in order to be successful.

In the context of this research, the entrepreneurship innovation theory helps to highlight the extent to which people are self-efficacious if they believe they have an innovative idea. It is also important for

this study to consider innovation in various contexts, as stipulated by Johnson (2001) that is creating a brand new product, changing the application of a product, changing the target market of a product or change in the way in which a product is delivered to the market.

2.6.2 Economic Theory to Entrepreneurship

After spending considerable time developing theories about enterprises without entrepreneurs, mainstream economics had to find a way to fit entrepreneurship into economic thought (Rocha, 2012). This changed in the early 20th Century, when the entrepreneurship theory was introduced into economic thought via labour economics, microeconomics, industrial organisation and economic growth and development that culminated in a new field of research, namely the economics of entrepreneurship (Rocha, 2012). Richard Cantillion was a leading figure in economic thought who advocated to bring back entrepreneurship, as he recognised that the entrepreneur was the individual who took advantage of any arbitrage opportunity that arises between markets (Landström, 2006). Several intellectual traditions arose from Cantillion's work, albeit several decades later (Rocha, 2012). The main economic thoughts surrounding entrepreneurship can be divided into Chicago, German and Austrian traditions. The leading figures in economic thought were Joseph Schumpeter (German tradition), Frank Knight (Chicago tradition) and Israel Kirzner (Austrian School) (Rocha, 2012).

Schumpeter's approach (German tradition) came from developmental economics, where he argued that the entrepreneur was there to disturb the economic status quo via creative destruction (Rocha, 2012). The entrepreneur disturbed the equilibrium by introducing new products through innovation (Hébert and Link, 1989). Schumpeter's creative destruction concept centred on the way in which innovations from new firms threaten the survival of established firms in the long run (Igami, 2015).

Frank Knight (1921) in Hébert and Link (1989) highlight the difference between risk and uncertainty. Risk, according to Knight (1921), exists when outcomes are uncertain but can be predicted using probability theory, while uncertainty exist when the future is unknown and unknowable using probability theory (Hébert and Link, 1989). In Cantillion's earlier theory, the basis of entrepreneurship lies in the lack of ability to foresee the future and Knight developed this thought further to stipulate that such uncertainty is the basis of "pure profit" (Montanye, 2006). Uncertainty lies as a central feature for any employee who wishes to leave his job to become an entrepreneur (Parker, 1996).

In the Austrian school of economic thought, Von Mises argued that the success and profits for any entrepreneur were based on his or her ability to anticipate the future correctly (Rocha, 2012). This is similar to what Frank Knight proposed. However, Israel Kirzner introduced a number of important elements to Knight, such as "spontaneous learning", "alertness" and "entrepreneurial discovery" (Kirzner, 1997). Learning is seen as "spontaneous" if it is not preceded by careful planning to acquire the knowledge but occurs through the experience of an alert person (Kirzner, 1996). Entrepreneurial "alertness" is the ability to identify arbitrage opportunities (Kirzner, 1996). "Entrepreneurial discovery"

presumes that equilibrium is a systematic process whereby entrepreneurs acquire more and more complete and accurate knowledge about the market (Kirzner, 1997).

Kirzner's (1997) contribution focussed on the role of knowledge and discovery in the process of market equilibrium. The Austrian approach view equilibrium as a movement by participants in the market towards more accurate and complete knowledge about supply and demand i.e. "entrepreneurial discovery" (Kirzner, 1997). The systematic process towards accurate and complete information is driven by "entrepreneurial discovery". The Austrian school differentiates between "sheer ignorance" and "imperfect information" (Kirzner, 1997). In the case of "sheer ignorance", there is an element of surprise when new information is known and the role of entrepreneurs is to push the boundaries of sheer ignorance back.

In the context of this research, economic theories of entrepreneurship provided insight into the way in which knowledge, risk and uncertainty can influence ESE, especially when compared to pursuing lower risk, full time employment.

2.6.3 The Push and Pull Theories of Entrepreneurship

Research into entrepreneurial motivation has led to two schools of thought about what gets people into entrepreneurship (Dawson and Henley, 2012). In general there are push and pull factors to entrepreneurship. As is implied by the words, "push" entrepreneurship is when people feel they have no choice but to become entrepreneurs due to circumstances, which creates necessity entrepreneurs. On the other hand, "pull" entrepreneurship is when a person chooses to be an entrepreneur for their own personal reasons, as they are attracted to it. However, Dawson and Henley (2012) argue that there is significant ambiguity in the "push" and "pull" motivation to entrepreneurship. To further complicate this reality, men and women differ significantly with regard to reported motivations (Dawson and Henley, 2012). For instance, women are more likely to report family concerns rather than financial motivation as reasons for being drawn or pushed into entrepreneurship (Dawson and Henley, 2012; Kirkwood, 2009). Brush (1992) argues that in numerous instances personal choices for entrepreneurship are too idiosyncratic in nature, which makes it difficult to impute the exact "push" or "pull" cause. In a way, the dichotomy of push or pull might be too simplistic (Dawson and Henley, 2012), as people may be getting into entrepreneurship due to a combination of both push and pull factors.

In research conducted by Dawson and Henley (2012), it was found that desire for independence was the most common reason cited by both genders for dabbling in entrepreneurship. The same research found that men went into entrepreneurship mostly for the "nature of occupation" and "wanted more money", whereas women cited "family commitments or wanted to work from home". A study by Kirkwood (2009) found that more women were influenced by the desire for independence than men and women considered their children as motivators more than did men. The same research highlighted that men considered job satisfaction more than women.

The push and pull entrepreneurship theories are important in the South African context, especially with significant push factors such as unemployment. For the purposes of this research, it was important to ascertain in what way the transformative learning theory could be used to transform the ESE of unemployed youth to be pushed or pulled into entrepreneurship.

2.6.4 Other Entrepreneurship Theories

2.6.4.1 Leibenstein's X-efficiency (1978)

The key assumptions of Leibenstein's X-efficiency theory are that (Leibenstein, 1966):

- people have selective rationality, meaning that they are selective with regard to the opportunities they are willing to pursue, based on their personality and economic context;
- contracts that govern behaviour are normally incomplete and in the process of being re-negotiated, based on observed cost and profit outcomes and
- effort applied by people is discretionary, which means people decide on the amount of effort they apply to a job.

Central to Leibenstein's X-efficiency theory is the idea of organisational entropy, which argues that costs have a tendency to rise as the organisation grows (Leibenstein, 1966). This is because as the organisation grows, there is reduced focus on key organisational objectives, as effort becomes dispersed among many people (Leibenstein, 1966). As the entrepreneur is no longer solely responsible, he changes his beliefs about his effort (Leibenstein, 1966).

The Leibenstein's X-efficiency theory provides insight into the nature of the entrepreneurial drive as the organisation grows. This is important in the context of this research, as it highlights that the learnings needed by a nascent entrepreneur differ from those needed by an entrepreneur who has been in business for some time.

2.6.4.2 Shackle's Theory

George Shackle's theory is mostly concerned with the study and analysis of human behaviour under conditions of uncertainty (Ford, 1990). Shackle argued for the management of uncertainty rather than risk, as risk implies a probability distribution (Ford, 1990). According to Shackle, a probability distribution is not truly applicable in economic situations (Ford, 1990). The entrepreneur does not face risk (with a probability distribution) but uncertainty, because a choice, once made, destroys all other choices (Shackle, 1983). In other words, in most cases when someone chooses to initiate a particular venture, all other alternatives are eclipsed, which nullifies a true probability distribution. Probabilities and mathematical expectations are replaced, in Shackle's theory, by potential surprises and focus-gain or focus-loss (Ford, 1990).

Shackle's theory is premised on the potential surprise function, the ascendancy and the gambler preference functions (Ford, 1990). Potential surprise is underpinned by the argument that if people are asked to evaluate single or conjunctive events, their subjective probabilities are closely correlated to their judgments of potential surprise (Fisk, 2002). Ascendancy expresses the idea that the decision-maker is focused on some decision alternative, as each decision will influence the future evolution of events in such a manner that the setting will not occur again (Fioretti, 2001). The gambler preference function is based on the understanding that the mind cannot simultaneously hold a vast amount of mutually exclusive information (Basili and Zappia, 2003). Eventually, once a decision has been made, it dominates all others as the only viable option until it fails (Basili and Zappia, 2003).

Shackle's theory is relevant to this research as it provides insight into why starting a venture is a fear-inducing process for the youth. Once the die has been cast and a business is initiated using the classical start-up process discussed in 2.6.2., the entrepreneur no longer considers any other options. The different entrepreneurship theories discussed in this section provide a clear understanding of the various facets of entrepreneurship. This provides a rich tapestry through which transformative learning and entrepreneurial self-efficacy can be formally considered. Closely related to entrepreneurship theory is the entrepreneurship start-up process, as discussed in the next section.

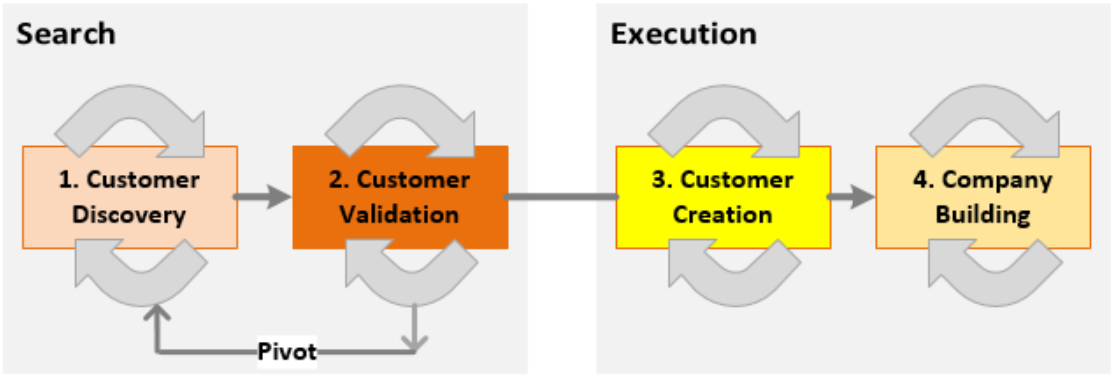
2.7 ENTREPRENEURSHIP PROCESS

Understanding the start-up process is important for this research, as it explores processes that can be learnt by the youth that will increase their ESE. Initiating an entrepreneurial organisation is fraught with uncertainty (Hébert and Link, 1989; Shackle, 1983) and according to Blank (2013), always a hit-or-miss proposition. Despite years of research into the start-up process and governments and universities pouring money into training and education programs, the start-up process remains dominated by the failure of new businesses. In the South African context, 70 to 80% of new businesses fail in the first five years (Fatoki, 2014a). According to Glauser and Holland (2016), new businesses fail because they do not have a good understanding of customers' needs. Pursuant to this start-up challenge, numerous scholars and consultants have proposed an ideal start-up process that minimises the risk of failure (Blank, 2013; Hisrich, Peters & Shepherd, 2005; Nieman and Bennett, 2006).

2.7.1 The Lean Start-Up Process

Blank (2013) proposes a lean start-up process that is characterised by minimal initial investment and obtaining customer feedback in order to minimise costs and proof of concept before any significant investment in a business concept. The lean start-up is an iterative process and is similar to agile software development, where software is development step by step while soliciting user feedback (Blank, 2013). The lean start-up is illustrated in Figure 2.2 below.

Figure 2.2: Lean Start-Up Process



Source: Blank (2013:6)

During the first stage, customer discovery, the founders translate ideas into a hypothesis about customer needs and create a minimally viable product to test the market (Blank, 2013). As a second stage, they get their initial customers to test it through early orders or customer usage (Blank, 2013). The pivot is if the founders realise that there is not much interest, they can change one or more of their hypotheses (Blank, 2013). During the customer creation stage, the product is refined and the start-up increases its marketing of the product. From this stage onwards the business transitions from start-up to customer development mode (Blank, 2013).

2.7.2 Classical Start-Up Process

The classical start-up process is covered by Hisrich et al. (2005) and Nieman and Bennett (2006) using a four step process of identifying and evaluating an opportunity, developing a business plan, determining resource requirements and initiating and managing the enterprise. These stages are discussed briefly below:

2.7.2.1 Develop a Business Plan

This stage assists the entrepreneur to identify the resources required to successfully take advantage of a business opportunity. A traditional business plan comprises a marketing plan, a human resources plan, a financial plan and an operational plan (Hisrich et al., 2005; Nieman and Bennett, 2006).

2.7.2.2 Identifying and Evaluating an Opportunity

During Identifying and Evaluating an Opportunity stage, the entrepreneur identifies an opportunity and forms an evaluation based on its feasibility and viability (Hisrich et al., 2005; Nieman and Bennett, 2006). Based on this evaluation, and after conducting a needs analysis, the entrepreneur then decides to either proceed with the start-up process or reject the idea if it is deemed unfeasible or he/she is not sufficiently skilled to exploit the situation (Hisrich et al., 2005; Nieman and Bennett, 2006).

2.7.2.3 Determining Resource Requirements

At this stage the entrepreneur identifies what he already has, versus what he or she needs. If there is a shortfall, he/she can explore the possibility of sourcing funding (Hisrich et al., 2005; Nieman and Bennett, 2006). The sources of financing are explored in section 2.8.2 of this chapter. However, the entrepreneur needs to combine and reuse resources, in order to cope with problems and take advantage of new opportunities (Guo, Su & Ahlstrom, 2015).

2.7.2.4 Start and Manage the Enterprise

Once the entrepreneur has completed the three preceding stages, in theory the business can be initiated (Hisrich et al., 2005; Nieman and Bennett, 2006). From this stage onwards the business will follow the usual stages of a business' life cycle.

This section provided insight into both the classical and lean start-up processes. Using the lean start-up process (Blank, 2013) could lower the fear of starting up and increase ESE, making it easier to transform nascent entrepreneurs into being full-fledged entrepreneurs. Lean start-up is based on the reality that a nascent entrepreneur no longer sees starting up as a daunting financial and personal investment where he or she has to abandon everything. The entrepreneur could try out, part time, to see if their concept works in the market before committing to it. Trying out part time would reduce the significant uncertainty the entrepreneur faces (Shackle, 1983) and increase their ability to foresee the future more accurately (Montanye, 2006). As business start-up has been reduced to a process (Lean Start-up process and Classical Start-up process), it is imperative to explore factors that influence entrepreneurs.

2.8 FACTORS AFFECTING ENTREPRENEURSHIP

Carland et al. (2015) argue that the positive outcomes of entrepreneurship are beyond question, but if a person is interested in transforming entrepreneurs, they need to understand the characteristics of the individual who becomes an entrepreneur. In general, the major driving forces behind the desire to initiate one's own business can be divided into demographic and psychographic factors (Fatoki, 2010). Demographic factors such as gender, family background, previous employment, education, race and cultural background have an impact on an individual's propensity for becoming an entrepreneur (Fatoki, 2010). Psychological factors focus on personal characteristics that influence an individual's desire to becoming an entrepreneur (Fatoki, 2010).

2.8.1 Psychological Factors driving Entrepreneurship

Psychological factors include those factors covered in a number of studies, such as the need for achievement (McClelland, 1961), risk-taking propensity (Brockhaus, 1980), locus of control (Brockhaus, 1982), tolerance of ambiguity (Schere, 1982) and desire for personal control (Greenberger and Sexton, 1988).

Individuals with a high need for achievement have a preference for moderately challenging tasks that require them to use skills and effort (Samydevan et al., 2015). Although there remains a need for further research to prove a causal relationship, Carland et al. (2015) hold that numerous studies have proven that there is a positive relationship between achievement motivation and entrepreneurship. Risk propensity is the extent to which an individual is willing to become involved in a situation with an unknown outcome (Samydevan et al., 2015). Various studies have found that entrepreneurs have a higher propensity for taking risks (Carland et al., 2015; Koloba and May, 2014). Internal locus of control is a belief that success or failure depends on personal effort, while external locus of control is a belief that success or failure is driven by chance (Hsiao et al., 2016). Hsiao et al. (2016) found that internal locus of control has a significant positive relationship with entrepreneurship. A person with a high tolerance for ambiguity strives to perform well in an unpredictable and unstable situation (Samydevan et al., 2015). An entrepreneur needs to have a high tolerance of ambiguity due to the ever-changing external environment characterised by volatility, uncertainty, complexity and ambiguity (Elkington et al, 2017). In a research conducted by Schere (1982) it was found that entrepreneurs had a higher tolerance of ambiguity when compared to managers.

2.8.2 Personal Factors in Entrepreneurship

Using another form of classification, Robichaud et al. (2001) posit that the fundamental drivers for initiating one's own business can be classified into: extrinsic rewards; independence/autonomy; intrinsic rewards and family security. Extrinsic rewards are external economic reasons for which an entrepreneur is working, while intrinsic rewards are more internal, such as growth and fulfilment (Fatoki, 2010). Independence is the desire to be one's own boss with the freedom to control one's own destiny, while family security is the desire to protect the family. The desire to be independent is similar to the desire for personal control proposed by Greenberger and Sexton (1988). All these personal factors exist in a context of individual characteristics influenced by gender, personal experience and age.

2.8.3 Gender as a Factor in Entrepreneurship

Males are more likely to be involved in entrepreneurial activities in most cultures, due to the magnitude of problems faced by females when attempting to become entrepreneurs (Herrington et al., 2017). In addition to cultural factors, females also face factors such as high levels of domestic responsibility, lower education levels, a lack of role models, fewer business oriented networks, a lack of assets and a culturally induced lack of assertiveness and confidence (Herrington et al., 2017). In recent times women globally succeeded beyond the traditional glass ceiling, but still face significant challenges in form of negative stereotyping, limited access to appropriate technologies and disparities in remuneration among other challenges (Ramadani, Hisrich, and Gërguri-Rashiti, 2015). Notwithstanding these challenges, Herrington et al. (2017) reported a closing gap in TEA scores, especially in South Africa.

Herrington et al. (2017) divide the drivers for entrepreneurial activities into male/ female necessity-driven or male/ female opportunity-driven. In general, necessity-driven entrepreneurs have no other choices of employment (survivalist-driven motivation), while opportunity-driven entrepreneurs are motivated by the desire to exploit identified opportunities (Herrington and Kew, 2016). In South Africa there are generally way more opportunity-driven than necessity-driven entrepreneurs. This is depicted in Table 2.1.

Table 2.1: Entrepreneurial Motivation by Gender in South Africa, 2001 - 2016 (as % TEA)

Description	2001	2005	2009	2013	2014	2015	2016	African Region 2016
Male Opportunity	53.4%	57.6%	63.9%	71.5%	71.4%	68.0%	76.5%	69.3%
Male Necessity	30.0%	32.2%	31.9%	26.8%	28.6%	30.2%	20.8%	27.1%
Female Opportunity	46.5%	46.7%	63.8%	64.4%	71.4%	62.2%	71.6%	65.9%
Female Necessity	44.8%	40.0%	34.0%	34.4%	27.0%	37.8%	27.1%	30.1%

Source: Herrington et al. (2017:31)

It can be seen from Table 2.1 that the trend is a general increase in opportunity entrepreneurs compared to necessity entrepreneurs for both sexes and there has been a significantly higher increase in female opportunity-driven entrepreneurs than males since 2001. In general, there are more opportunity-driven entrepreneurs in South Africa than the average in the African region. This is a desirable development, as opportunity-driven entrepreneurs are more likely to employ people other than themselves (Herrington and Kew, 2016). It should be born in mind that the necessity versus opportunity causes is analogous to the "push" and "pull" factors of entrepreneurship. If this comparison is taken into account, then it should be born in mind that the dichotomy of necessity or opportunity entrepreneurs may be too simplistic (Dawson and Henley, 2012). For instance, how would you classify a young man with young family who leaves a job in another town because his marriage is on the verge of breaking up, and starts his small financial planning practice? He has grown to love it as he helps his former colleagues from university with financial planning as they start and grow their families. Is that necessity or opportunity entrepreneurship?

Besides gender, age is another individual factor that warrants further discussion in relation to South African entrepreneurs.

2.8.4 Age in Relation to Entrepreneurship

Entrepreneurship tends to be favoured more by people between the ages of 25 and 55 (Herrington et al., 2017). For instance, in 2016 TEA for 25 - 34 year olds was 6.3%, for 35 - 44 year olds it was 8.4% and for 44 - 54 year olds it was 9.6% (Herrington et al., 2017). Compared to the African region during the

same time, TEA for those age groups was 20.8%, 18.9% and 15.6%, respectively. TEA then drops off sharply between the ages of 55 and 65 to 3.1% in South Africa (Herrington et al., 2017).

Further afield, Zhao et al. (2015) reported a U-shaped relationship between entrepreneurs' age and entrepreneurial success. This implies that middle aged entrepreneurs are generally less successful than those who are younger or older. However, exploring females only on the relationship between age and entrepreneurial success, Zhao et al. (2015) found a more positive relationship. This is contrary to widely held belief that age has a positive relationship with entrepreneurial success due to an older person's extended social and business networks and experience (Stefanović and Stošić, 2012). Stefanović and Stošić (2012) further argue that older entrepreneurs have a higher survival rate than younger entrepreneurs due to their personal and social capital. The higher survival rate among older entrepreneurs is also sometimes due to limited employment opportunities available to them (Stefanović and Stošić, 2012). This means older people may persist through the poor performance of their business because they have lower employment prospects than those who are younger. If a younger person were to go through a rough patch, they can use their experience to quickly pursue full time employment opportunities elsewhere.

However, older people are often less willing to become entrepreneurs (Stefanović and Stošić, 2012). Stefanović and Stošić (2012) ascribe this to two issues: reduced risk tolerance and the time value of money. In other words, as people get older they are more risk averse and do not have enough time to make a high discounted level of money due to the shorter remaining timespan of their careers.

Notwithstanding the above, youth entrepreneurship is important in South Africa, given the high level of youth unemployment (Gwija, 2014). Statistics South Africa (2016) pegged the unemployment rate for college leaving youths (20 – 24 years of age), at 52.2%. This indicates the need to develop the youth through entrepreneurship as a means of reducing youth unemployment and up skilling them. Youth involved in entrepreneurial activities are up skilled for both entrepreneurship and employment. Skills are important, as the South African economy has a high demand for skills and experience due to the technology-led growth that began in the late 1990s (Graham and Mlatsheni, 2015).

Despite the plethora of government programs aimed at encouraging entrepreneurship, the development of youth entrepreneurship remains unsatisfactory (Gwija, 2014). This is exemplified by youth aged 18 to 24 years had a TEA of 6.7% in 2016, 6.3% in 2015 and 4.8% in 2014 (Herrington et al., 2017). Besides age and gender, it is critical to explore the ways in which an individual's background influences their orientation towards entrepreneurship.

2.8.5 The effect of background on Entrepreneurship

Previous research has found that there are a number of background characteristics that affect a person's entrepreneurial intentions (EI) (Davoudi, 2017). Childhood factors such as family business background,

migration background, difficult childhood, frequent relocation and financial distress potentially have an effect on an individual's desire to become an entrepreneur (Davoudi, 2017).

Many scholars agree that growing up in an entrepreneurial family increases the potential of an individual to become entrepreneurial (Davoudi, 2017; Hout and Rosen, 1999; Mathews and Moser, 1995). The supportive argument is that parents are important role models for their children and impart the relevant entrepreneurial attitudes and behaviours (Chlosta et al., 2012; Hout and Rosen, 1999). Although research indicates mixed results with regard to the relationship between entrepreneurial families and EI, Davoudi (2017) argues that there are more positive than negative influences. In short, family business background, generally, has a positive effect on a person's intention to become an entrepreneur.

Migration background refers to the family moving from one country or continent to the next during one's childhood. The leading causes of migration, besides war, are mostly lack of career opportunities, poverty, low income and politics (Niebuhr, 2010). For the most part migration has a positive relationship with entrepreneurship for first generation migrants because of the characteristics specific to them moving from their home country (Davoudi, 2017). Migrant-specific characteristics are summarised by Al Ariss and Crowley-Henry (2013) as the ability to see beyond their nose, leave everything behind and start anew. All these characteristics lead them to a desire for greater independence and achievement, more than locals or second generation migrants (Davoudi, 2017).

Frequent relocation refers to moving between cities during childhood. Frequent relocation is often associated with poor academic performance in children (Anderson et al., 2015) but over the long term has a positive impact on autonomy, creativity and social contribution (Bramson et al., 2016). Frequent relocation forces children to learn to adapt to new environments and new social networks, which assists them to be more open minded, more confident and more self-reliant (Vidal and Baxter, 2016). However, Bures (2003) argues that the direction of these children's development is heavily influenced by family support. If there is significant family support, then they become more entrepreneurial but if family support is lacking, these children develop a higher level of risk aversion, that is, they become non-entrepreneurial.

Difficult childhood refers to relationships with family, for example, rejection by a parent (Davoudi, 2017). Rejection leads to a desire to control everything, which makes it difficult for an individual to be employed and subject to organisational rules (Malach-Pines et al., 2002). Other aspects of a difficult childhood, such as insecurities, personal tragedies and neglect, often make people very risk averse, thus preferring fixed employment to being entrepreneurial (Cox and Jennings, 1995).

According to Jayawarna et al. (2014), financial distress during childhood can be divided into distress suffered but with support from the family or financial distress suffered without family support. If financial distress was suffered but with family support, the relationship with entrepreneurship is positive, while without family support, people are more oriented towards higher risk aversion, full time

employment and stability (Jayawarna et al., 2014). Cetindamar et al. (2012) argue that the real determining factor is family support. Family support has more psychological impact on a child's development than money. Dyer Jr and Handler (1994) provide further insight, in that children with family support who experienced financial distress become more entrepreneurial to avoid the powerlessness they felt about their financial situation and they feel the need to provide better for their own family.

Besides background factors, young people face other challenges if they wish to initiate a business in South Africa. These challenges include the nature of the education they receive versus what is needed in business, their level of education and relevant experiences, all of which make up the human capital (Unger et al., 2011).

2.8.6 Human Capital and Entrepreneurship

The term human capital includes attributes such as education, experience, knowledge and skills (Unger et al., 2011). For the purpose of this study, it is important to be able to distinguish between the contribution of entrepreneurship education and that of general education with regard to a construct such as ESE. There is significant investment into entrepreneurship education the world over but there remains a lack of consistent evidence that entrepreneurship training and education help create more and better entrepreneurs (Martin, 2013). Numerous researchers acknowledge a positive relationship between general education and entrepreneurship (Botha et al., 2007; Do Paco et al., 2011; Hannon, 2006; Hisrich and Brush, 1986; Kojo Oseifuah, 2010; Roffe, 2010).

It should be highlighted that the acquisition of human capital, like education and general training, does not always lead to skills. There is a psychological process involved in transforming acquired knowledge into useful skills, and in this case, entrepreneurial skills (Unger et al., 2011). The transformation of knowledge into skills is easier when acquired knowledge is closely related to the tasks that need to be performed (Thorndike, 2013).

For instance, Unger et al. (2011) stipulates that there are several benefits of human capital, such as in obtaining financial support and the ability to accumulate more new knowledge and skills based on one's level of education. In their research, Unger et al. (2011) found a positive overall relationship between human capital and entrepreneurship, albeit small.

An empirical study by Augusto Felício et al. (2014) found that human capital affects social capital and cognitive ability. The same study found that organisational performance was strongly influenced by human capital through cognitive ability. In another study Rauch and Rijsdijk (2013), found that general human capital significantly influenced an enterprise's growth (but specific human capital was not significantly related to the growth of the enterprise). Both general and specific human capital were

negatively related to failure (Rauch and Rijsdijk, 2013). In this context, specific human capital refers to entrepreneurial training.

Despite the perceived positive relationship, the degree of the relationship between human capital and entrepreneurship differs. For instance, some studies report a significant relationship, such as Duchesneau and Gartner (1990), with $r > .40$ and Frese et al. (2007) with $r > .20$. Other studies indicate an insignificant relationship, such as Davidsson and Honig (2003) with $r < .06$ and Gimeno et al. (1997) with $r < .10$. One of the potential differences in the level of impact of education could be that the researchers are not measuring the same items and also the presence of other variables that moderate the relationship (Unger et al., 2011).

Box 2.1. Education in an Environment of Inequality, Volatility, Uncertainty, Complexity and Ambiguity

In South Africa, like many other developing countries, many children even those with higher levels of education attainment (completed years in school) often have few cognitive skills. This is because of a poor start to their schooling. For each year of learning, they progressively fall further behind, to such an extent that at a certain point no learning is occurring at all.

In South Africa, by the end of the Foundation Phase (grades 1-3) many learners only have rudimentary reading and writing skills. This makes it difficult for them to catch-up, especially for those subjects which are of a cumulative nature like Maths and Science.

The challenge of teaching a class with many learners with a deficit in learning is that each class becomes a multi-grade class. This makes it virtually impossible for a teacher to teach to the required standard of assessment.

Recent studies into mathematics achievements in South Africa show that, by grade 3 children in poorest 60% of schools are already 3 years' worth of learning behind their wealthier peers. This gap continues to grow with each succeeding grade, such that by grade 9, they are five years behind, in terms of learning materials. In short, the majority of students in South Africa (who are poor) are starting behind, and staying behind. This low quality of education becomes a poverty trap, born poor and cannot escape poverty.

It is therefore not surprising that many learners drop out in high school. At some point, it is virtually impossible to progress further. In fact only 50% of those learners who start grade 1 reach matric, most having dropped off in grade 10 and 11.

Sources: Spaull (2015), Spaull and Kotze (2015), Schollar (2008)

The General Household Survey of 2011 showed huge inequalities in the South African education, based on race and household income.

From the discussion presented above, it is apparent that general education is positively related to entrepreneurial activities (Davidsson and Honig, 2003; Duchesneau and Gartner, 1990; Frese et al., 2007; Gimeno et al., 1997). However, entrepreneurship education is not always positively related to entrepreneurial outcomes such as growth (Rauch and Rijsdijk, 2013). This implies that the significant investment in specifically educating people in the field of entrepreneurship is being wasted (Mentoor and Friedrich, 2007), as people are not showing more entrepreneurial construct gains from the specific entrepreneurial education. Pursuant to this study, there is a need to transform educational programmes for the youth to increase their ESE in an attempt to minimise this waste.

The background affecting entrepreneurship exposed several factors that influence attitude and motivation towards entrepreneurship. Environmental factors have a significant role in entrepreneurship. For instance, Gupta et al. (2014) hold that a country's institutions have become a centrepiece in conceptualising an institutional environment. It is the country, as represented by institutions, which significantly influence entrepreneurial activity (Gupta et al., 2014). Pursuant to this, the next section discusses the South African entrepreneurial environment.

2.9 THE SOUTH AFRICAN ENTREPRENEURSHIP ENVIRONMENT

This research was conducted in South Africa, a country characterised by low TEA (Herrington and Kew, 2016), complex and ever-changing legislation (SBP, 2014) and bedevilled by a high start-up business failure rate (Fatoki, 2014a; Friedrich, 2016). There is a need to transform the low TEA and high business failure rate through educational interventions, such as that which is the focus of this study. The mostly negative South African environmental factors are discussed in the following paragraphs.

2.9.1 Total Early-Stage Entrepreneurial Activity (TEA)

An important measure of entrepreneurship in a country is total early-stage entrepreneurial activity (TEA). TEA is defined by Bosma and Sternberg (2014) as the prevalence of people involved in nascent entrepreneurship activities or who are acting as owner managers in new firms for up to 42 months. These are individuals who indicate that firstly, they have done something to initiate a business, such as looking for equipment or a location or have begun writing a business plan or saving money etc. (Bosma and Sternberg, 2014). Secondly, the nascent entrepreneurs should indicate that they are either the sole owner or co-owner of the enterprise. These people should not been have paid a salary or wage for more than three months, otherwise they transition from being nascent entrepreneurs to owner managers (Bosma and Sternberg, 2014).

The total early-stage entrepreneurial activity (TEA) for South Africa in 2016 was 6.9%, with the country at 13 positions below the median of participating countries (Herrington et al., 2017). This was a

deterioration from 2015, where TEA was 9.2% and 8 positions below the median of participating countries (Herrington et al., 2017). Compared to the African region, South Africa's TEA is 2.5 times below the average, as depicted in Table 2.2 below.

Table 2.2: TEA by Age Group in South Africa 2014-2016

Age	2014	2015	2016	African Region 2016 Average
18 – 24 years	4.8%	6.3%	6.7%	16.3%
25 – 34 years	9.0%	10.9%	6.3%	20.8%
35 – 44 years	7.5%	12.3%	8.4%	18.9%
45 – 54 years	7.4%	8.0%	9.6%	15.6%
55 – 64 years	4.9%	4.4%	3.1%	11.4%

Source: Excerpt from Herrington et al. (2017:29)

Overall, TEA should be higher in countries with lower per capita GDP, as these countries would rely significantly on SMMEs to provide employment (Herrington et al., 2017). Pursuant to this line of thought, TEA for South Africa should be in the region of 20%, far above the current 6.9% (Herrington et al., 2017). With a TEA of 20%, it is believed that unemployment in South Africa would stabilise or improve.

Despite low TEA, South Africans report a positive attitude towards entrepreneurship, with more than 75% of respondents to the 2016 Global Entrepreneurship Monitor Survey reporting that there is substantial media coverage of successful entrepreneurs (Herrington et al., 2017). This is a slight growth from the 2015 Global Entrepreneurship Monitor Survey, which reported a score of 74.2% for the same measure (Herrington and Kew, 2016). However, the perceived positive media coverage is in contrast to a decrease in perceived opportunities. There was a significant decrease in opportunity perceptions from 40.9% in 2015 to 35.0% in 2016 (Herrington et al., 2017). The comparative figures for opportunity perception were 51.8% for Africa and 42.0% for efficiency-driven economies for the same period (Herrington et al., 2017).

In providing insight into the sharp drop in opportunity perception, Herrington et al. (2017) proposed that this is due to low growth in GDP over an extended period. Herrington et al's (2017) view might be simplistic if we consider discourse analysis, which according to Achtenhagen and Welter (2007) incorporates the discursive fields such as sciences, politics, education, every-day life, business or administration. In light of discourse analysis, it is possible that significant negative media coverage of corruption in the government during the same period dampened opportunity perception. This line of thinking is underpinned by Achtenhagen and Welter's (2007) argument that different discursive fields influence each other.

Relevant to this study are the "perceived capabilities" of initiating a business, which translates to entrepreneurial self-efficacy. There was a significant decrease in perceived capabilities from 45.4% in 2015 to 37.9% in 2016 (Herrington et al., 2017). The comparative figures for the same period were 58.6% for Africa and 55.0% for efficiency-driven economies. In fact, South Africa is ranked 55th out of 62 economies in the same study.

In providing insight into potential causes of the dismally low perceived capabilities, Herrington et al. (2017) blame South Africa's education system, which they argue does not enable the appropriate skills for entrepreneurship. This sentiment was echoed by the Human Resources Development Council Technical Task Team (2013), when they recommended that there should not be any debate about introducing an entrepreneurship curriculum into the current precariously positioned educational system. Comparative global statistics (like the 2011 Progress in International Reading and Literacy Study [PIRLS] and Trends in Mathematics and Science Study [TIMSS]) show that South African education trails other comparable countries in terms of quality of outputs (Wolhuter, 2014). For instance in the 2011 TIMMS science test, South Africa obtained the second lowest score out of 45 participating countries (Wolhuter, 2014). Even more worrying is that the TIMSS 2011 test on grade 9 learners revealed that they performed between two and three grades lower than an average grade 8 learner from other middle income countries (Spaull, 2015), which translates to three to four grades lower if corrected for the right grade. These low metrics might be what is translating to poorer entrepreneurship metrics, in line with research which shows that education is positively related to entrepreneurial activities (Davidsson and Honig, 2003; Duchesneau and Gartner, 1990; Frese et al., 2007; Gimeno et al., 1997).

The comparatively dismal metrics could also be as a result of the peculiarities of the South African economy, which has the characteristics of a developed country despite being a developing country (Fedderke, 2014). For instance, there is a disproportionate contribution of the services sector against the backdrop of an industrial sector stuck in long term decline (Fedderke, 2014). The South African education system is not geared for the type of entrepreneurial opportunities available in the dual economy.

The dual economy is characterised by the formal economy, which is comparable to that of a developed country and the informal economy, which is comparable to that of other developing countries (Smit and Musango, 2015). Negative entrepreneurial metrics in South Africa are exacerbated by the reality that the majority of those entrepreneurs who dare try, fail (Fatoki and Chindoga, 2011; Friedrich, 2016). One of the leading causes of failure is a lack of financial support (Agwa-Ejon and Mbohwa, 2015). In light of this, it is useful to discuss the financing of entrepreneurs in South Africa.

2.9.2 Financing of Entrepreneurs in South Africa

Financial constraints are a leading cause of failure among entrepreneurs, and therefore it is necessary to explore the financing environment and the way in which attempts are made to satisfy the needs of

entrepreneurs. There are a number of institutions in South Africa that deal with the financing of entrepreneurs. Financing institutions include SEDA, Khula and commercial banks, all of which are briefly discussed below.

2.9.2.1 Small-Scale Development Agency

Small-Scale Development Agency (SEDA) is an agency under the South African Department of Small Business Development, which was established in 2004 through the National Small Business Act, 2004 (SEDA, 2017). The primary goals for SEDA are to implement the government's small business strategy and to develop and promote small enterprises in co-ordination with various stakeholders (SEDA, 2017). It was established by merging three existing organisations, namely the Enterprise Promotion Agency, the National Manufacturing Advisory Centre and the Community Public Private Partnership Programme (SEDA, 2017). In April 2006 SEDA expanded to include The GODISA Trust and the Technology Programmes (SEDA, 2017). SEDA provides business development and support services for SMMEs in partnership with other organisations that operate in the same space (SEDA, 2017). Their main focus is on the implementation of programmes targeted at business development (SEDA, 2017). SEDA offers a number of services, which include:

- business plan assistance;
- assistance with links to finance providers;
- entrepreneur training through courses, seminars and workshops;
- hosting networking events;
- assistance with marketing plans;
- mentorship programs;
- business incubation services and
- funding and distributing publications in the small business space.

2.9.2.2 Khula

Khula Enterprise Finance aims to develop and enable the sustainability of SMMEs through bridging the funding gap that remains unaddressed by commercial banks (Small Enterprise Finance Agency, 2017). Khula operates through commercial banks, retail financial institutions, specialist funds and joint ventures (Small Enterprise Finance Agency, 2017). Pursuant to their business model, Khula has direct lending products, which they utilise to fund customers directly, as well as wholesale lending products, where funding is provided through other parties (Small Enterprise Finance Agency, 2017). Khula also provides non-financial support, such as post-loan mentoring, business and technical support, board representation etc. (Small Enterprise Development Agency, 2016). In the financial year 2015/2016, Khula disbursed R1.2 billion and supported 54,833 new small businesses (Small Enterprise Development Agency, 2016).

An impact assessment undertaken by Makina and Malobola (2004) revealed that the majority of Khula's beneficiaries were urban based and not really impoverished. The employment creation of those that have been supported has been impressive, according to Makina and Malobola (2004). According to the latest report, jobs created and sustained grew by 26% in 2015/2016, compared to the previous reporting period of 2014/2015 (Small Enterprise Development Agency, 2016). Despite Khula employing mentors, Makina and Malobola (2004) found that the mentors were not fully utilised by entrepreneurs.

2.9.2.3 Commercial Banks

In the past few years the relationship between SMME development and financing has elicited significant research (Rogerson, 2008). The literature on SMME development and financing can be divided into demand and supply categories. Demand side financing focuses on access to finance and financial requirements (Rogerson, 2008). Issues such as a lack of access to credit, high interest rates and low usage are related to demand side issues (Rogerson, 2008). On the supply side, the focus has been on the workings of the primary role-players, such as banks and government institutions (Rogerson, 2008). Supply side issues include concerns of bank clients, banking services and products (Rogerson, 2008).

On the demand side, when deciding to finance a business several factors need to be considered. The factors are generally divided into the personal characteristics of the entrepreneur and his or her functional management (Pretorius and Shaw, 2004). The seven personal characteristics are perseverance, commitment to the enterprise, willingness to take risks, good human relations, creativity/ innovation, positive attitude and approach (Pretorius and Shaw, 2004). Functional management skills include an ability to plan, knowledge and skills relevant to the enterprise, client services, and use of experts, knowledge of competition, concerns with high quality of work, bookkeeping and financial management (Pretorius and Shaw, 2004).

According to Pretorius and Shaw (2004), some of the reasons for SMMEs not being financed come down to the remuneration policies of banks. Bank employees are awarded bonuses and salary increases based on the performance of their loan book. This drives of managers to be risk averse and fail to see the upside potential of enterprises (Pretorius and Shaw, 2004).

Numerous SMMEs also make use of debt financing, money they borrow from banks or other financial institutions (Standard Bank, No Date). The borrowing could be either long term or of a short term nature (Standard Bank, No Date). Debt financing could be by means of a bank overdraft, debtor financing, asset financing, all in exchange for interest paid to the lender (Lamna, 2015). Nicol (2016) highlights the challenges of bank financing as strict criteria to which banks adhere before advancing funding. Because of the challenges it is unlikely that many start-up businesses will qualify for funding, especially without an established track record or collateral.

2.9.2.4 Other sources of financing in South Africa

The easiest source of funding is friends and family, especially when a person has a small lifestyle business that is only starting (Nicol, 2016). The primary limitation of this type of funding is the limited amount of money one can raise from friends and family.

Venture capital can also be accessed through venture capital investors who have strict requirements, for example to provide cash only for a percentage ownership in the business (Nicol, 2016). They usually require decision-making powers in the business (Lamna, 2015). Venture capitalists do not invest for the long term and they require high returns over a short period (Nicol, 2016). Lamna (2015) highlights that venture capitalists are usually ideal in the early stages of the business when banks are unlikely to provide funding. They typically assist during idea generation, start-up, growth and going public (Job, 2016).

Angel investors are usually high net-worth investors who are willing to provide funding to a business they believe has high potential to succeed (Lamna, 2015). They usually require ownership or they provide debt, which can be converted into equity over time (Lamna, 2015). Their main aim is assisting the budding business and they are less focused on making money than banks and venture capitalists (Nicol, 2016).

Private equity consist of individuals who pool their money to invest in a business over an extended period (Standard Bank, No Date). Private equity investors usually seek big business investments or those individuals who have invested significantly in their own business and have a carefully thought out business plan in order to minimise their own risk (Standard Bank, No Date). Private equity investors prefer to invest in businesses that are innovative, display rapid growth and have good financial records (Lamna, 2015). In short, this kind of money is difficult to obtain for a start-up.

Crowd funding is another source of funding available in South Africa. This is when a person appeals to the public to pre-fund an idea (Lamna, 2015). Job (2016) defines crowd funding as funding an idea by raising money through small contributions from a large number of people. The success of crowd funding depends on the entrepreneur's network and ability to appeal to the right type of people who would be interested in funding their type of business (Thulo, 2017). Popular crowd funding platforms in South Africa include Kickstarter, Fundfind, Jumpstarter and StartMe (Thulo, 2017).

If a business manages to survive the financing challenges, it then needs to survive the burden of South African legislation exacted on small businesses.

2.9.3 Legislation and Entrepreneurs

Complex and burdensome legislation often negatively impact the confidence of entrepreneur's and motivation to successfully start and manage an entrepreneurial business (ESE). In light of this, there is need to understand the South African complex and ever changing regulatory environment, which is a

challenge for entrepreneurs (SBP, 2014). South African laws sometimes are overlapping and contradictory and forces the business owner to spend considerable amount of time dealing with compliance issues (SBP, 2014). SBP (2014) estimated that small businesses spend an average 8 days per month dealing with compliance and regulation related issues. This translates to approximately R18,000 a month or R216,000 per year (SBP, 2014).

The most important regulatory issues that demand an entrepreneur's attention are tax issues (employee tax, VAT and own tax), labour laws (basic conditions of employment and UIF), safety and health regulations, municipal by laws and consumer protection (Thulo, 2017). According to SBP (2014), the regulatory environment offers considerable risk and administrative burden to SMMEs. Government policies present a significant impediment to initiating a business, according Herrington and Kew (2016). Government related factors cited by experts as having a negative impact on entrepreneurs in South Africa include obtaining permits and licences and registering a new private company (SBP, 2014).

In light of South Africa's complex legislative environment, it would be prudent to explore how the country fares on the Competitiveness Index. The Competitiveness Index shows "progress in building an enabling environment for innovation… [and] to safeguard the benefits of openness to trade and investment that has led to record reductions in poverty rates in recent decades" (Schwab, 2016:4). South Africa was positioned at 47 out of 138 countries in the 2016-2017 report, which was a slight improvement from the 2015-2016 score of 49 out of 140 (Schwab, 2016). Mauritius (ranking 45th) and South Africa (ranking 47th) were the most competitive economies in the region. South Africa's leadership was in financial markets, education, infrastructure and competitive market (Schwab, 2016). The Global Competitiveness Report 2016-2017 identified the following current challenges for South Africa: stalled infrastructure development and deteriorating institutional governance characterised by political uncertainty and mistrust (Schwab, 2016).

Other legislative related metrics are presented in Doing Business reports (The World Bank, 2017a), which measure regulations that either enhance or hinder business performance in 190 economies. The factors considered by the Doing Report (2017) were starting a business, obtaining construction permits, connecting electricity, registering property, obtaining credit, protecting minority investors, paying taxes, cross border trading, enforcing contracts and resolving insolvency. On the ease of Doing Business rankings for 2017, South Africa was in position 74 out of 190 countries. South Africa's rating was below a number of other African countries, namely Mauritius (49), Rwanda (56), Morocco (68) and Botswana (71). The second largest economy in Africa, Nigeria, is in position 169 (The World Bank, 2017a). South Africa made initiating a business a little easier by introducing an online portal to search business, but increased property tax and vehicle tax and made paying taxes more complicated (The World Bank, 2017a).

Based on the above discussion it is apparent that South Africa needs to improve the regulatory environment. An improved regulatory environment would be beneficial for SMMEs but it is unlikely to

take place in the short term. Herrington and Kew (2016) point out that the ministry responsible for SMMEs is managed by bureaucrats and political appointees with limited knowledge of business. This is contrary to the practice in countries such as the United Kingdom, which employs people with an SME background with a sound understanding of small business issues. This implies that a step in the right direction would be for the government to simply change those who are employed in the ministry to people with entrepreneurial experience.

Besides legislation, there are numerous other challenges that South African businesses face, as discussed below.

2.9.4 Challenges faced by Entrepreneurs in South Africa

In the context of this study, it is difficult to have a high level of ESE in a challenging environment such as that in South Africa. Between 70% and 80% of SMMEs fail in the first 5 years in South Africa (Fatoki and Garwe, 2010; Friedrich, 2016). According to Burger (2016), this is among the highest failure rates in the world. An even bleaker statistic was cited by the South African Trade Minister in 2013, that 5 out of 7 SMMEs fail in the first year in South Africa (Burger, 2016). While the statistics are bleak, Meszaros (2016) questions the veracity of most statistics regarding business failure. He argues that most of these numbers are generally estimates and they include businesses that cease trading because the owner has retired, as failed businesses (Meszaros, 2016).

Although it is generally accepted that the failure rate of new enterprises is high, it should be noted that most of the statistics are estimates. The reality of determining business failure is further complicated by differing definitions of business failure. According to Fatoki (2014a), business failure in the economic sense is when a business cannot generate economic profit, while failure in a legal sense implies liquidation. Of interest to this section is neither the economic nor legal definition of failure, but a practical sense, that is, when the business ceases operations. This takes into account the fact that a business may be profitable but still ceases operations or is still legally constituted, but it has stopped trading.

Cant and Wiid (2013) divide causes of business failure into endogenous micro causes (internal) and exogenous macro causes (external). Endogenous micro factors are factors related to the entrepreneur and the new business and exogenous macro factors being those factors beyond the control of the entrepreneur. The leading causes of failure are also dependent on who is reporting the causes of failure, whether it is the entrepreneur or external organisations such as banks (Fatoki, 2014a). The main causes of business failure are managerial problems (Fatoki, 2014a; Radipere and Van Scheers, 2005; SME South Africa, 2016), lack of training and education (Chimucheka, 2014), poor quality of education (Steenekamp, 2013), limited access to financial services (Agwa-Ejon and Mbohwa, 2015), inaccessible markets (Bureau for Economic Research, 2016), lack of support structures (Gwija, 2014), inaccessibility

of technology (Abor and Quartey, 2010) and the lack of skilled manpower (Horwitz, 2013). The contributing factors are briefly discussed below.

2.9.3.1 Managerial problems

There is widespread agreement that managerial problems rank as one of the top causes of business failure in South Africa (Radipere and Van Scheers, 2005; SME South Africa, 2012; Fatoki, 2014). Fatoki (2014a) specifies the managerial problems as the lack of managerial experience and functional skills (e.g. planning, organising, leading and controlling), and poor attitudes towards customers. SME South Africa (2016) stipulates that managerial problems include a lack of relevant knowledge to run a business. Radipere and Van Scheers (2005) postulate that non-financial factors that lead to business failure are a lack of education, inadequate managerial skills, poor access to markets and a lack of information.

The skills required for managing an SMME are not particularly complex or high level. Choto et al. (2014) report that if SMMEs adopted few simple managerial and administrative skills, their financial situations could improve. An approach that can be used to improve managerial capacity in the South African context is the diffusion of managerial capacities across different businesses (George et al., 2016b). Although George et al. (2016b) discussed this with regard to a corporate setting where local managers adopt Western practices, the same principle can be applied a step down. Entrepreneurs could benefit from gaining managerial experiences in formal corporate settings, which they could then adapt to their entrepreneurial business setting. Chimucheka (2014) argues that entrepreneurs' poor managerial skills can be attributed to a lack of education or, according to Steenekamp (2013), the poor quality of education.

2.9.3.2 Lack of education and training and poor quality of education

Research by Nieman (2001) found that entrepreneurial training in South Africa is very traditional and as such does not address the needs of the entrepreneur. He also found that there was still confusion between business and entrepreneurial training. Another study by Solomon et al. (2013) found that despite significant investment in the development of small businesses in South Africa, it has limited effect. As mentioned above another South African problem is the poor quality of education (Herrington and Kew, 2016; Steenekamp, 2013). This is worsened by the emphasising being placed on the theoretical aspects of entrepreneurship rather than the practical application (Steenekamp, 2013).

Solomon et al. (2013) recommended enhancing the personal effectiveness of owner managers in training programs and the longitudinal evaluation of the content used during training. Keith et al. (2015) recommend the incorporation of deliberate practice in informal entrepreneurial settings. Research into deliberate practice sheds light on what can be done outside formal training programs and in dynamic environments such as South Africa.

2.9.3.3 Limited access to financial services

In South Africa financial challenges are cited most often as the leading exogenous cause of business failure. Agwa-Ejon and Mbohwa (2015) report that a lack of funding and a lack of access to finance are among the leading causes of business failure. Choto et al. (2014) also found that 60% of entrepreneurs reported that they face financial challenges. The current trend in South Africa, according to Agwa-Ejon and Mbohwa (2015), is the continued tightening of credit as banks take precautionary measures. Agwa-Ejon and Mbohwa (2015) report that approximately 75% of loan applications submitted by SMMEs are rejected by banks. Berg and Fuchs (2013), in their research of small business financing, found that banks in South Africa only approve 8% of the total loans applied for by SMMEs. This is lower than in countries such as Kenya, where 17.4% are approved, Rwanda, 17% and Tanzania, 14% (Berg and Fuchs, 2013). In the five countries that were studied, South Africa only performed better than Nigeria, whose share of SMME loans was only 5% (Berg and Fuchs, 2013). In explaining a much lower percentage of financing for SMMEs, South African banks reported a restrictive legislative environment for lending (Berg and Fuchs, 2013). In commenting on the South African situation, Berg and Fuchs (2013) argued that it might also be due to the duality of the South African economy, where large banks are struggling to find a small business financing model that could be relevant.

In a study by Fatoki and Asah (2011) into the reasons why entrepreneurial businesses were not financed by financial institutions, it was recommended that entrepreneurs should be investment ready. By investment ready, it meant that entrepreneurs need to be able to provide collateral and also attend seminars and programs to improve their managerial competence. In addition to managerial competencies, Fatoki and Asah (2011) recommend that entrepreneurs be trained on the requirements of banks and other creditors.

2.9.3.4 Lack of awareness of support structures

Despite the numerous sources of financial assistance discussed above and the support made available by the government, the reality is that many of the intended beneficiaries are not aware of these. For instance, research by Gwija et al. (2014) found that despite support that was made available, youth in the Western Cape lacked awareness of the support structures, which they also deemed inaccessible. In an interesting contradiction, that same research revealed that the youth remained enthusiastic about becoming entrepreneurs. In their concluding remarks in another study, Fatoki and Chindoga (2011) recommended more visibility of support organisations, especially among the youth. They recommended conducting road shows in which these support organisations advertise what they need from an entrepreneurs as a means of highlighting the ways in which they support entrepreneurs.

2.9.3.5 Inaccessible markets

According to George et al. (2016a), the most significant challenge faced by entrepreneurial business in Africa is the absence of market-supporting institutions such as intermediaries, contract enforcing

mechanisms and efficient transportation. A significant portion of the economically active population and operational businesses need to cope with underdeveloped marketing institutions and missing infrastructure (African Development Bank, 2014). The Bureau for Economic Research (2016) suggests that a lack of access to markets is one of the leading causes of small business failure.

The development of market access cannot be left to the government, as it has shown that, despite numerous promises, the government lacks the capacity to build competitive SMMEs without assistance (Rogerson, 2013). In light of that, Rogerson (2013) recommends first building linkages between established businesses and SMMEs through a process of market diversity and second, building public sector markets through procurement. Abor and Quartey (2010) highlight another unique access challenge affecting SMMEs in South Africa as that of limited access to international markets. They argue that faced with intense competition both locally and internationally, SMMEs need to be up skilled to enable them to compete internationally. For instance, SMMEs are held back due to limited international market experience, poor quality control, limited access to international partners and to cap it all, lack of information about foreign markets (Abor and Quartey, 2010).

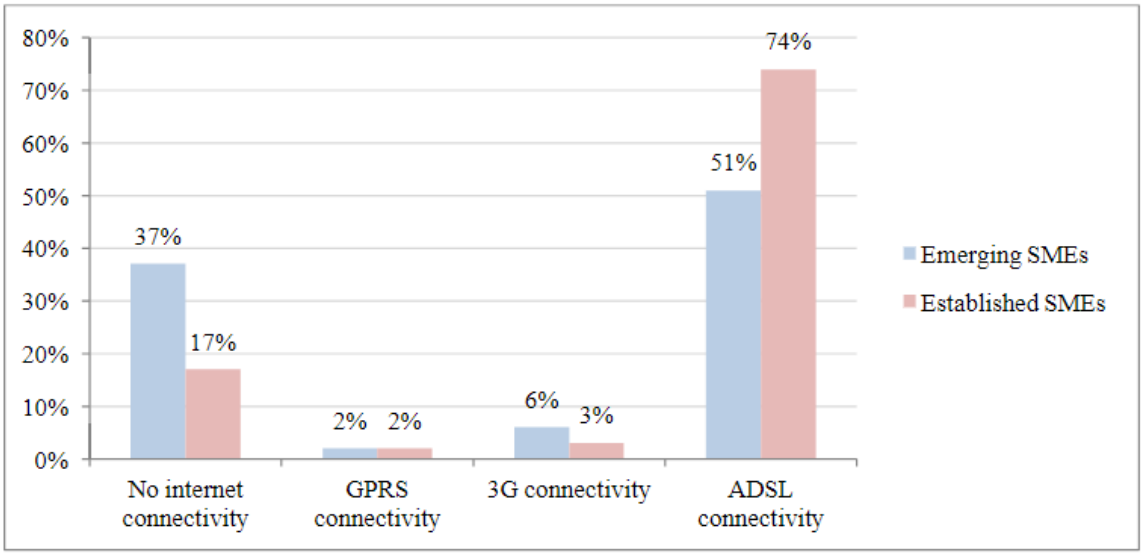
In light of this research into transformative learning, knowledge about markets both local and international could be the key to enhancing ESE. The thinking is that if the youth are familiar with the opportunities that are available and market access is simplified, it should lead to a transformation of their attitude towards their ability to execute ESE, which should in turn increase EI.

2.9.3.6 Inaccessibility to technology

Investment and staying abreast with technology has become important for all businesses, especially entrepreneurial businesses (Fatoki and Garwe, 2010). Technology can be used in the development of new SMMEs and can be used as part of a strategic approach to maximise business opportunities (Fatoki and Garwe, 2010). Information and Communications Technology (ICT) can also be used to narrow the information gap and with that to improve decision-making (Cant and Wiid, 2016). Fatoki and Garwe (2010) recommend including computer training in the school curricula to improve general technological awareness.

According to Abor and Quartey (2010), one of the main challenges faced by entrepreneurial businesses in a lack of access to appropriate technologies. In many cases this technology is foreign and they need to lease or pay for licensing (Abor and Quartey, 2010). A research study by Cant and Wiid (2016) into SMMEs found that they faced high ICT costs and also lacked knowledge of how to use it effectively. Internet connectivity is also a challenge, especially for new and emerging SMMEs. Figure 2.3 below illustrates the connectivity of South African SMMES based on the type of SMME and the type of connectivity.

Figure 2.3: South Africa's SMME Internet Connectivity



Source: Cant and Wiid (2016:1879)

From the Figure 2.3 above it can be seen that a significant number of SMMEs do not have internet connectivity, 37% of emerging SMMEs and 17% of established SMMEs. However, it is encouraging to see that 74% of established SMMEs and 51% of emerging SMMEs have ADSL connectivity.

Research conducted by Gwija (2014) found that youthful entrepreneurs were incorporating technology into their businesses. They posited that this could reflect an appreciation of the role of technology in creating competitive advantage.

2.9.3.7 Lack of skilled manpower

South Africa is experiencing a paradoxical reality in terms of skills and employment, characterised by high unemployment levels and skills shortages (Horwitz, 2013). At the heart of the South African labour paradox is the reality of the necessary skills being unavailable whilst Oluwajodu et al. (2015) report an increase in graduate unemployment. Skills shortage against a backdrop of high levels of unemployment is not unique to South Africa. Other high growth emerging economies such as China, South Asia and a number of Middle East countries are populous but suffer from a skills shortage.

It is necessary to define skills shortage before analysing the South African situation and the way in which this shortage affects SMMEs. For instance, Daniels' (2007) definition stipulates that a skills shortage occurs when the demand for a particular set of skills exceeds the supply. The definition of scarce skills is not synonymous with 'high skills', such as those of doctors and engineers (Daniels, 2007). Scarce skills are those skills that are needed by organisations at a certain in time and they are in short supply in the sense that the demand exceeds the supply (Daniels, 2007).

Gamble (2004) names 3 levels of skills based on one's level of knowledge, namely low, intermediate and high. This is illustrated in Table 2.3.

Table 2.3: Classifying Skills by Level of Knowledge

Level of knowledge	Characteristic
Low	• Trade workers • Knowledge of set routines and procedure • Understanding of an entire process not required • Typically found in mass production environments
Intermediate	• Mostly craft and artisanal trades • Knowledge is a combination of theory and practise • Emphasis is on practical rather than conceptual
High	• Mostly specialised professions e.g. doctors and engineers • Knowledge of the entire process needed • Emphasis is on conceptual rather than practical • Usually includes a managerial component

Source: Gamble (2004:173-175)

In describing the status of skills shortages in South Africa, Horwitz (2013) reported a 40% shortage of artisans, one engineer for every 3,200 people, (compared to China and India with a 1:150 ratio). The situation is exacerbated by declining enrolments in relevant programs (Horwitz, 2013).

Skills shortages mean that scarce skills come at premium wage prices (Horwitz, 2013). In response to this situation, organisations are increasing salaries to above market value (Horwitz, 2013), which makes it difficult for SMMEs to recruit the right calibre of staff. This translates to mediocre to poor performance, which in turn could mean the difference between survival and closing the doors of an entrepreneurial organisation.

Having discussed the South African entrepreneurial environment, which included discussing South Africa's low TEA, financing sources, restrictive legislation and challenges faced by entrepreneurs, it is vital to analyse the education of entrepreneurs in South Africa. This discussion is relevant for understanding youth ESE, as it provides insight into what could be contributing to their level of ESE.

2.10 EDUCATION OF ENTREPRENEURS IN SOUTH AFRICA

After analysing the entrepreneurial environment above, it is important to specifically discuss entrepreneurial education in South Africa.

2.10.1 Background

From the late 1990s to the early 2000s the South African economy moved into a high productivity, technology-led growth path (Graham and Mlatsheni, 2015). This led to a demand for highly skilled employees against a backdrop of an ever increasing unskilled labour force (Graham and Mlatsheni, 2015). The obvious result was the growth in the unemployment of unskilled labour in an economy in need for skilled labour to drive technology-led development (Graham and Mlatsheni, 2015). In light of this, policy makers believe that entrepreneurship training and education could lead to higher economic growth and innovation (Radipere, 2012).

Interest in entrepreneurship and small business management education grew significantly during the 1980s characterised by institutions offering accredited and non-credited courses (Radipere, 2012). Interest in providing more education is predicated on the assessment of self-employment programmes in industrialised countries, which reveals that well educated and trained people with higher skills levels are more likely to be successful entrepreneurs (De Gobbi, 2014).

Despite significant interest in entrepreneurship education, research into its efficacy is limited (Chimucheka, 2014). Research would help improve entrepreneurship education outcomes by evaluating and ascertaining critical success factors. A number of researchers argue that there is a limit to what can be formally taught, thus implying that experience is the most critical success factor for effective entrepreneurship education (Chimucheka, 2014).

As it is generally agreed that most elements of entrepreneurship can be taught and Hannon (2006) suggests a three stage model of teaching. The first stage involves answering, “What is entrepreneurship?”, “What do entrepreneurs do?” and “Why do we need entrepreneurs?” The second stage is about the learner taking responsibility for their own learning and the question “How do I do it?” is answered. The third and final stage is characterised by the questions, “Can I become an entrepreneur and how do I manage a business?” Hannon’s (2006) three stage conceptualisation of entrepreneurship education is not focused on transformation, but informing a person to a point where they can decide whether or not entrepreneurship is for them. The question is, what then should be entrepreneurship education’s overarching goals?

2.10.2 Goals of Entrepreneurship Education

Gedeon (2017) holds that the primary goal of any entrepreneurship education should be the transformation of students. Student transformation is defined as changes in knowledge (Head), skills

(Hand) and attitude (Heart) (Gedeon, 2017:1). If there is agreement in setting student transformation as the primary goal of entrepreneurship education, factors such as professors, facilities and courses become input factors, while number of start-ups, average starting salary and number of students employed are output factors (Gedeon, 2017). If student transformation is the primary focus of entrepreneurship education, the learning outcomes are clear as well as the attitudes, beliefs, values and intent. This is depicted in Table 2.4 below, which positions the primary goal of entrepreneurial education as student transformation.

Table 2.4: Goal-setting framework

Primary Goal	Learning Outcomes	Attitudes, beliefs, values and intent
Student transformation	• Lifelong learning skills • Communication skills • Teamwork skills • Social capital skills (persuasion, negotiation, networking) • Creativity and innovation skills (alertness, opportunity spotting) • Guerrilla skills (bootstrapping, acquisition of resources, planning under uncertainty) • Motivational skills (psychological capital, empowerment) • Entrepreneurial thinking skills (independent and critical thinking, self-management, adapting)	• Entrepreneurial desirability • Self-efficacy • Internal locus of control • Values • Entrepreneurial intent

Source: Excerpt from Gedeon (2017:4)

Fatoki and Garwe (2010) argue that entrepreneurship education is one of the factors limiting the growth of the South African economy. Chimucheka (2014) argues that entrepreneurial education can contribute to the empowerment of numerous people and assist them to realise their potential. Entrepreneurship education can also play a meaningful role to change the attitudes of South Africans towards self-employment and encourage their engagement in start-up processes (Chimucheka, 2014).

Chimucheka (2014) highlights the different aims espoused by various stakeholders in entrepreneurship education. For instance, students expect entrepreneurship education to enable them to initiate new businesses and develop skills that will make them more employable. Existing entrepreneurs expect entrepreneurship education to help them solve their existing business problems, for example business growth, profitability and expanding the market (Chimucheka, 2014). The government's expectation is that entrepreneurship education will lead to job creation, economic growth, skills enhancement, the development of a culture of entrepreneurship and the eradication of poverty (Chimucheka, 2014). Businesses, on the other hand, expect entrepreneurship education to teach students to have a general understanding of business, creative work attitudes and an entrepreneurial approach (Jack and Anderson, 1999). This brings us to the question of what the value of education is with regards to entrepreneurship?

2.10.3 The value of entrepreneurship education

The value of entrepreneurship education is that it promotes the development and improvement of the relevant entrepreneurial skills (Chimucheka, 2014). It follows that better education leads to better entrepreneurs. According to Chimucheka (2014), research into entrepreneurial education has found a positive relationship between education and SMME performance. Successful entrepreneurs possess, in addition to creativity and innovative flair, strong general management skills, business know-how and a network of contacts (Timmons and Spinelli, 2007). Lack of these skills generally limits the growth and sustainability of an SMME (Chimucheka, 2014).

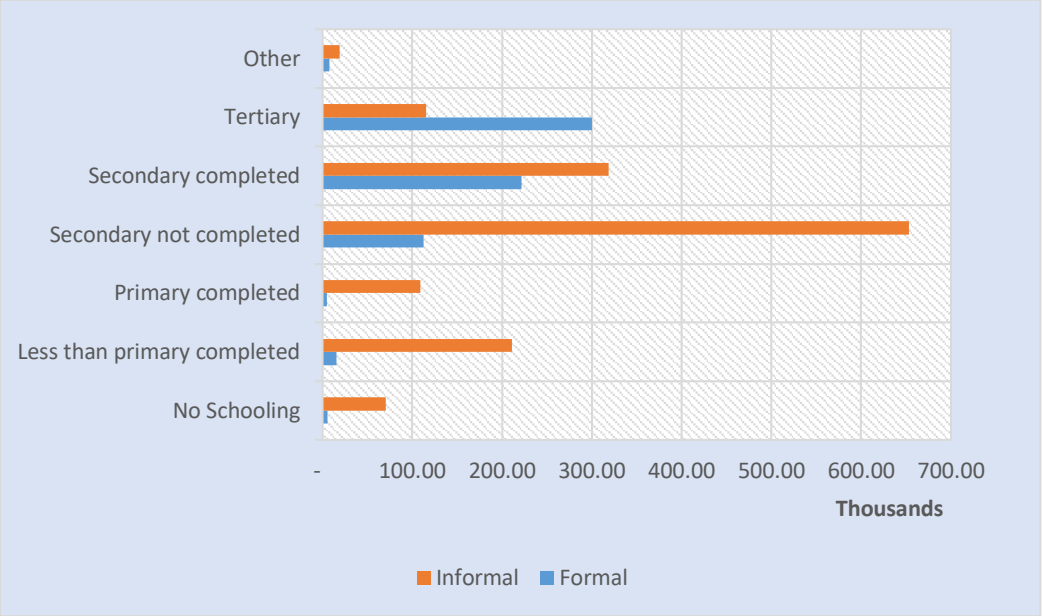
Dejaeghere and Baxter (2014) highlight the need to distinguish between necessity oriented and opportunity oriented entrepreneurship training. Necessity entrepreneurship training is aimed at lifting people out of poverty, usually targeted at unemployed people to encourage them to initiate micro-enterprises (Dejaeghere and Baxter, 2014). Opportunity entrepreneurship training is aimed at people who currently own small-scale businesses that can be improved. Necessity oriented educational programmes need to be accompanied by supportive policies, as in most cases necessity entrepreneurs will never formalise their businesses (Dejaeghere and Baxter, 2014).

Choto et al. (2014) found that 87% of survivalist enterprises had an ultimate goal of growth. This suggests that there is a chance that necessity entrepreneurs also desire to formalise their businesses but lack the wherewithal to enter the formal sector. Opportunity entrepreneurship training is aimed at businesses with the potential to grow and expand the labour market (Dejaeghere and Baxter, 2014). Dejaeghere and Baxter (2014) argue that there should be a clear distinction between the types of education provided, something that is not always clear in literature.

2.10.4 Educational levels and entrepreneurship

In terms of education in South Africa, approximately 80% of SMME owners have at least some secondary education and only 19% have only primary school and less, while 3.55% have no schooling (Bureau for Economic Research, 2016). Education plays a role in whether the business operates formally or informally. Most SMME owners who have tertiary education operate their businesses formally, while those with an incomplete high school education operate informally (Bureau for Economic Research, 2016). This is illustrated in Figure 2.4 below.

Figure 2.4: SMME Owners By Education and Formal/ Informal Sector (2015: Q 2)



Source: Bureau for Economic Research (2016: 25)

The above figure shows that even though a huge majority of businesses are informal (66.5% of total), the proportion of formally operating businesses increases as level of education increases. In fact 69.4% of business owners with tertiary education have businesses operating formally.

Having dealt with the goals and value of entrepreneurship education, a discussion of the institution for educating and training entrepreneurs follows.

2.10.5 Institutions dealing with entrepreneurial education in South Africa

For the purposes of this research it is important to have a good understanding of the various institutions that offer education to entrepreneurs. There are a number of institutions in South Africa that deal with entrepreneurship education. Promoting entrepreneurial education is in line with current research, which supports a positive relationship between education and entrepreneurship (Botha et al., 2007; Do Paco et al., 2011; Hannon, 2006; Hisrich and Brush, 1986; Kojo Oseifuah, 2010; Roffe, 2010). These institutions include the normal schooling system, universities and business incubators. These institutions are discussed briefly below.

2.10.5.1 Schooling System

Entrepreneurship is one of the outcomes of education from grades R to 9 (Isaacs et al., 2007). From the government directives, entrepreneurship training is compulsory up to Grade 9 by means of the subject referred to as Economic and Management Sciences (Isaacs et al., 2007). One of the four outcomes of that subject is Entrepreneurial Knowledge and Skills.

In a study of the education and training of entrepreneurs in Sweden, Elert et al. (2015) found that it increases the long term probability of initiating a firm. However, it has no effect on a firm's probability of survival. Can this be achieved in the South African schooling system?

In work done by the Human Resources Development Council Technical Task Team (2013) in which they benchmarked South Africa's school entrepreneurship education against best practice, the recommendation was that South Africa should not introduce an entrepreneurial curriculum in South African schools. This recommendation took into consideration the precarious nature of the South African schooling system. However, they did recommend a low key approach to entrepreneurship, which involved providing tools and resources to schools to encourage critical thinking, analysis, creativity and innovation.

In an earlier study by Isaacs et al. (2007), it was found that 60% of high schools in South Africa do not present entrepreneurship training programmes, despite government directives. Only 19% of rural and 57% of urban schools present some form of entrepreneurship training. However, some of this gap is being filled by non-governmental organisations such as the Foundation of Business Development, Education with Enterprise Trust and the South African Institute of Entrepreneurship.

Research conducted by Steenekamp (2013) about the Mini-Enterprise Programme offered by Junior Achievement South Africa to students ranging from Grades 10 to 11. The main goal of the Mini-Enterprise Programme is to empower young people through skills that will assist them to convert their dreams into a functioning business (Junior Achievement South Africa, 2017). When this goal was put to the test through his research, Steenekamp (2013) found that there was no noticeable or practically significant impact on entrepreneurial attitudes, entrepreneurial intentions, adaptive cognition and innovative skills for learners who completed the program.

2.10.5.2 Universities

Entrepreneurship education is still in its early stages (comparatively) in South African universities, although a number of universities have been offering entrepreneurship courses since the early 1990s (Chimucheka, 2014). There are numerous entrepreneurship courses available at present but proof of their efficacy is difficult to quantify (Chimucheka, 2014). In spite of this, there is a general expectation that entrepreneurship education will contribute to job creation, economic growth and the eradication of poverty (Jack and Anderson, 1999). In general the target of entrepreneurship education is varied, ranging from small business owners, those who wish to initiate a business and scholars, SMME consultants and advisors (Brockhaus et al., 2001).

Radipere (2012) holds that although a significant amount of research has gone into designing entrepreneurship education at high school level, there is a need for significant research into how to design courses at university level. This would help lecturers to meet the need for appropriate entrepreneurship education (Radipere, 2012). This is in line with the overriding goal of this research,

that is, to improve university entrepreneurship education in such a manner that it helps to create entrepreneurs who are ready to initiate businesses rather than entrepreneurship programme graduates with certificates.

The challenge of entrepreneurship education at universities is that it should not only be aimed at transmitting course content or knowledge but more importantly, developing entrepreneurial skills, changing attitudes and values (Mentoor and Friedrich, 2007). To resolve this challenge, a growing volume of literature on entrepreneurship is arguing for a departure from lecture-based, passive learning to action oriented experiential learning (Jones and English, 2004).

Developing experiential entrepreneurship courses faces a number of challenges. In addition to the complexities encountered in developing normal courses at universities, academics also face a lengthy process of revising curricula and an unsupportive funding mechanism from the Ministry of Higher Education in South Africa (Mentoor and Friedrich, 2007; Davies, 2001). To further complicate the situation, there are insufficient resources to support the development of the small classes that are necessary for effective action-oriented, experiential, entrepreneurial education (Mentoor and Friedrich, 2007; Davies, 2001).

According to Mentoor and Friedrich (2007), academics also resist introducing entrepreneurship as a distinct programme and prefer to blend it into existing traditional courses, as they undervalue the behavioural element required in teaching entrepreneurial skills. They are not necessarily resisting the development of experiential courses but perhaps realise the amount of time needed without a direct personal reward. There is no incentive to have a more effective entrepreneurship course when the university will not recognise the effort, or in effect will refuse to fund a more expensive but effective course. South Africa's university entrepreneurship education has thus far been academic oriented, mostly producing entrepreneurship programme graduates rather than successful entrepreneurs (Radipere, 2012).

Nicolaides (2011) argues that South African entrepreneurship education cannot be discussed without specific reference to historical realities. During apartheid the government saw the role of higher education as being to serve the needs of industry, that is, to generate a workforce trapped in the comfort of a boss-subordinate relationship (Nicolaides, 2011). This generated an obvious offshoot of people generally wanting to be employed after their time in universities and rarely to initiate their own entrepreneurial businesses (Nicolaides, 2011).

According to Nicolaides (2011), there is significant demand for entrepreneurial education, which is encouraging numerous faculties to offer entrepreneurship courses. However, there are no suitable theories to guide what should be included in entrepreneurial education in order to obtain optimal outcomes (Norton et al., 1999). Fatoki (2014b) highlights that currently, entrepreneurial courses are predominantly found in business management and economics related courses to the exclusion of others.

He recommends making it a compulsory module at all levels in all faculties. There is a need to first change the nature of entrepreneurship courses before such a drastic step is taken, as making the course compulsory would be wasteful, as current courses are largely theoretical and do not lead to the desired results (Mentoor and Friedrich, 2007). The question is, can you really compel someone to become an entrepreneur?

Jesselyn and Mitchell (2006) draw a distinction between education ***about*** entrepreneurship and education *for* entrepreneurship. The former focuses on teaching about entrepreneurship while the latter is akin to the developing competencies, skills, aptitudes and values necessary to initiate an entrepreneurial businesses (Jesselyn and Mitchell, 2006). South African universities mostly teach about entrepreneurship (Radipere, 2012). They hardly use out-of-class teaching methods, as indicated in Table 2.5 and their assessments are mostly examinations, assignments and tests, as indicated in Table 2.6.

Table 2.5: Out-of-Class Teaching Methods

Method	Undergraduate	Diploma
Internship	2%	3%
Community development	8%	2%
On-site visits	10%	3%
Feasibility studies	3%	1%
Small business consulting	1%	0%

Source: Radipere (2012:110)

According to Table 2.5 above, only a limited number of universities use any out-of-class exercises. Those that do, mostly use on-site visits and community development. This is a discouraging finding, as out-of-class exercises are critical for students' development towards entrepreneurship (Radipere, 2012). Table 2.6. clearly illustrates the academic nature of South African entrepreneurial courses.

Table 2.6: Major Assessment Methods used

Method	Undergraduate	Diploma
Examinations	100%	100%
Assignments	90%	68%
Tests	75%	78%
Business Plan	44%	56%

Source: Radipere (2012:110)

The table above shows that all universities use examinations as an assessment method, as well as tests and assignments, with the least used assessment method being a business plan (44% for Degree and 56% for Diploma). From table 2.6 it can be deduced that assessment is purely theoretical, implying that assessment is made based on whether or not students have mastered the theoretical concepts. In light of the classification by Jesselyn and Mitchell (2006), South African universities and Technikons teach about entrepreneurship and produce entrepreneurship programme graduates (not entrepreneurs).

In an attempt to overcome some of these challenges, Mentoor and Friedrich (2007) recommend a close partnership between universities and business communities. Business and universities can instil the entrepreneurial spirit in students. Businesses can provide role models and venues for out-of-class exercises such as internships, on-site visits and business consulting. Davies (2001) goes a step further and challenges academics in entrepreneurship to be involved in entrepreneurial activities as a means of practising what they teach. If they are experts in entrepreneurship, academics should be seen to be actively involved in what they teach.

A study by Abaho et al. (2015) in East and Central Africa found that lecturers with business experience were more effective than their counterparts without business experience. Numerous lessons can be learned if academics embark on their own entrepreneurial journeys, which will provide them with insights that can be shared with their students. Entrepreneurship is not just about skills, it is about attitudes and mind-sets (Mentoor and Friedrich, 2007).

Hannan et al. (2004) provides an interesting contrast between a student of entrepreneurship and a practising entrepreneur. While a student is grappling with understanding the subject matter and not too concerned about the outcome of entrepreneurial projects, entrepreneurs are more concerned about using that knowledge to solve real business problems. The entrepreneur's application of the lessons learnt could sometimes mean the difference between success and failure. In real life, having the knowledge does not guarantee success but only increases the chances of success.

The results of entrepreneurship education were highlighted in research conducted by Mentoor and Friedrich (2007) into one entrepreneurship module at the University of Western Cape. There was no statistically significant change in the students' achievement orientation. In fact, there was a statistically significant reduction in some students' innovation orientation. The self-esteem orientation for all the groups tested by Mentoor and Friedrich (2007) was lower at the end of the course. These are negative statistics, given that the control group selected by Mentoor and Friedrich (2007) did not indicate any statistically significant change between the test periods. Could this be an isolated case? In commenting on these results, Mentoor and Friedrich (2007) stated that an entrepreneurship module offered as part of a management degree does not appear to make students more entrepreneurial. They should perhaps have made an even more dramatic pronouncement that some elements of that specific module were detrimental to entrepreneurship training.

2.10.5.3 Business Incubators

Business incubation is a concept worth exploring, if there is concern regarding the long term survival of an entrepreneurial enterprise. Masutha and Rogerson (2014) deem business incubation as a critical tool to ensure the survival of a start-up business. In the context of this study, the youth could have a higher level of ESE if they know that there is significant support for transforming their dreams into reality.

There are several definitions of a business incubator in the existing literature but this study adopted the definition of a business incubator as, "an organisation designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that include physical space, capital, coaching, common services, and networking connections" (Entrepreneur, 2014:1). According to Lose and Tengeh (2016), incubators aim to sustain an image of entrepreneurs as self-reliant by providing a broad spectrum of services such as space, funding, legal, accounting and computer services. Dubihlela and Van Schaikwyk (2014) provide further insight into the role of an incubator by highlighting that they do not replace entrepreneurial initiatives, but create conditions that better serve the entrepreneur.

In South Africa there are generally two types of incubators, namely technology centres and business incubators (Lose and Tengeh, 2016). The market of business incubation is dominated by government-funded agencies such as SEDA and a few private sector partnerships (Lose and Tengeh, 2016). Masutha and Rogerson (2015) report that in 2013 there were 51 incubators of which 42 were public sector-funded incubators (via SEDA) and 9 that were privately funded, as well as one that was a joint venture between the public and private sectors. Universities also have their own incubators to encourage the development of small businesses (Dubihlela and Van Schaikwyk, 2014).

Dubihlela and Van Schaikwyk (2014) advance eleven factors that can be used to evaluate the success of business incubators.

- Access to science and technology expertise and facilities.
- Comprehensive business plan.
- Stringent selection criteria.
- Available funding.
- Quality of entrepreneurs.
- Stakeholder support.
- Supportive government policies.
- Competitive and motivated management.
- Financial sustainability.
- Experienced advisory board.
- Networking.

In a study by Lose and Tengeh (2015) on business incubators in the Western Cape, it was found that they lacked sponsorship, production space and advanced technology facilities and they were struggling to expand into different areas. There was also a low graduation rate or alternatively, no clear guidelines as to who should graduate from incubation (Lose and Tengeh, 2015). Further research was undertaken by Lose et al. (2016) on the businesses in incubation and it was found that 53.6% of the participants strongly agreed that their incubation programme had the potential to create more job opportunities. They

joined the programme to gain several skills, such as finance, networking and growth. In their 2016 research of businesses incubators, Lose and Tengeh (2016) reported that despite the participants' challenges with obtaining funding for their businesses, they did not have regrets about joining the program. In fact, they declared that incubators were there to effectively meet their objectives (Lose and Tengeh, 2016).

From these positive results it can be argued that the best way to increase the chances of survival for any SMME would be to place it in a business incubator as soon as it shows promise. However, the reality is that only a limited number of entrepreneurs can be accommodated by incubators, as they are too few to service everyone. The question (of this research) remains, how can one implement an effective and cost effective solution to transform the youth into being more entrepreneurial by increasing their ESE?

2.11 ASSESSING THE IMPACT OF ENTREPRENEURSHIP EDUCATION AND TRAINING

Research focused on entrepreneurship education and training has produced mixed results. There is a significant body of evidence of numerous programs not showing any change in entrepreneurial constructs (Mentoor and Friedrich, 2007; Steenekamp, 2013). For instance, the results of research conducted by Mentoor and Friedrich (2007) showed no change in entrepreneurial orientation and achievement orientation, plus a reduction in self-esteem orientation (refer to section 2.9.5.). Research by Steenekamp (2013) found no discernible change in entrepreneurial attitudes, entrepreneurial intentions, adaptive cognition and innovative skills for learners who went through the program run by Junior Achievement South Africa.

Other studies however, indicated mixed effects of entrepreneurship training (Fayolle and Gailly, 2012). Fayolle and Gailly (2012) found that the entrepreneurial program they were evaluating led to no increase in entrepreneurial intention immediately after the program for students without any background in entrepreneurship, and a reduction in those students with some background in entrepreneurship. However, six months later those students without entrepreneurial background showed a significant increase in entrepreneurial intent.

Elert et al. (2015) found a positive relationship between a high school entrepreneurship education programme and the probability of starting a firm. A study by Rauch and Hulsink (2015) indicated an increase in entrepreneurial attitudes and perceived behaviour control. These mixed results of entrepreneurial education highlight that not all entrepreneurship programs are effective. There is a real need to evaluate every program based on its own merit. Transforming the ESE of the youth needs careful curriculum design followed by ongoing evaluation to ensure that the program achieves its intended objective as proposed with the TESE model in section 7.5.

2.12 CONCLUSION

This chapter explored the challenges faced by the South African economy. Its GDP contracted by 0.7% in the first quarter of 2017 (Statistics South Africa, 2017a) and services contribute disproportionally to the GPD at 68.7%, compared to China's 43% and India's 56% (The World Bank, 2017b). It has also been shown that unemployment is on the rise, with an estimated 52.2% of college leaving youths (20 – 24 years of age) remaining unemployed (Statistics South Africa, 2016). Entrepreneurship is defined as owning or running your own small business (The Economist, 2014). Several economic theories of entrepreneurship were discussed, in addition to the "Push" and "Pull" Entrepreneurship Theory (Dawson and Henley, 2012), Leibenstein's X-efficiency (Leibenstein, 1966) and Shackle's Theory (Shackle, 1983). The importance of entrepreneurship was highlighted, notwithstanding the high failure rate of entrepreneurial businesses. Factors that influence entrepreneurship are divided into demographic and psychographic factors (Fatoki, 2014b).

The chapter also reveals that among the exogenous challenges faced by entrepreneurs, compliance with legislation and regulations adds as much as R18,000 a month to the costs of an entrepreneurial business (SBP, 2014). Research into entrepreneur education in South Africa has indicated mostly negative results (Mentoor and Friedrich, 2007; Steenekamp, 2013). However, entrepreneurs in incubators had no regrets about joining the program despite their challenges with obtaining funding (Lose and Tengeh, 2016). Notwithstanding the mixed results, there is a need for a training model to transform the youth into being more entrepreneurial, especially by increasing their ESE. ESE and related issues are discussed in the next chapter.

CHAPTER 3 :
POSITIONING ENTREPRENEURIAL SELF-EFFICACY IN ENTREPRENEURSHIP THEORETICAL FRAMEWORK

3.1 INTRODUCTION

Developing entrepreneurs' ESE is important in South Africa given the high unemployment rate of 27.7% (Statistics South Africa, 2017), negative economic growth (Statistics South Africa, 2017A) and the reality that approximately 60% of the labour force is employed by SMMEs (Groepe, 2015). The study into organisational entrepreneurial orientation (EO) provided the theoretical framework that led to the development of individual entrepreneurial orientation (IEO) (Ferreira et al., 2015), which attempts to ascertain what makes an individual entrepreneurial. According to Kollmann et al. (2007), to understand what makes a person entrepreneurial, there is a need to understand his or her social environment. An entrepreneur's environment influences his or her entrepreneurial self-efficacy (ESE), that is, the confidence to perform entrepreneurial tasks (Chen et al., 1998). The level of ESE in turn influences entrepreneurial intention (EI), which is the desire to own a business (Thompson and University of Bath, 2009).

The real value of ESE is that it ultimately influences business performance (Man et al., 2002). This chapter briefly explores seven entrepreneurial performance models, four of which highlight the prominence of motivation in entrepreneurial performance. If motivation follows self-efficacy (Wood and Bandura, 1989), it is desirable to conduct research into ways through which it can be increased in an individual, which is the core focus of this research.

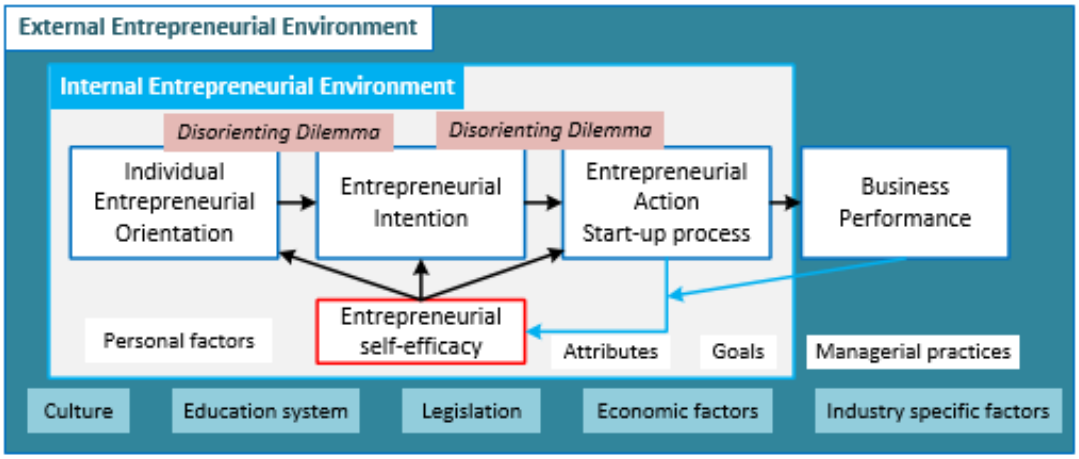
This chapter introduces a brief discussion of EO and IEO. It then explores self-efficacy, ESE and factors that influence ESE in detail. The cultural dimensions of Hofstede (1980) are used to explore culture as one of the influences of ESE. This is important, as Thurik and Dejardin (2011) argue that there is an inverse relationship between the cultural trait of uncertainty avoidance and entrepreneurship. This is important for this research as there is need to transform those cultural traits to increase ESE. The chapter concludes by arguing that although ESE is a stable construct (Chen et al., 1998), there are ways to increase it in an individual.

3.2 ORGANISING MODEL

To better understand entrepreneurial self-efficacy (ESE), this research proposes an organising model as depicted in Figure 3.1, which positions it in the entrepreneurial process. The organising model illustrates that there are two entrepreneurial environments, external and internal. Central in the internal entrepreneurial environment is entrepreneurial self-efficacy (ESE). In the internal environment, individual entrepreneurial orientation leads to entrepreneurial intentions, which, if there is a triggering event, will lead to entrepreneurial action. The ultimate survival of the entrepreneurial venture depends

on its performance. All this occurs within the confines of the larger external environment (refer to Figure 3.1). The internal and external entrepreneurial environments interweave to produce the level of business outcomes which are experienced by a country, as shown in figure 3.1.

Figure 3.1: Organising Model - Entrepreneurial Environment



From figure 3.1 above it can be seen that ESE influences IEO, EI and entrepreneurial action. ESE is also influenced by the results of the start-up process and ultimate business performance (Glancey et al., 1998; Wickham, 2001). Factors such as gender, level of education, attributes, personal goals and managerial practices significantly influence the internal entrepreneurial environment. The internal entrepreneurial environment is in turn influenced by the external environmental factors such as culture, the education system and so on, over which the entrepreneur has no control.

The above organising model is what mostly guides the flow of this chapter. The next section explores entrepreneurial orientation and the way in which the concept is applied to individual entrepreneurial orientation.

3.3 ENTREPRENEURIAL ORIENTATION (EO)

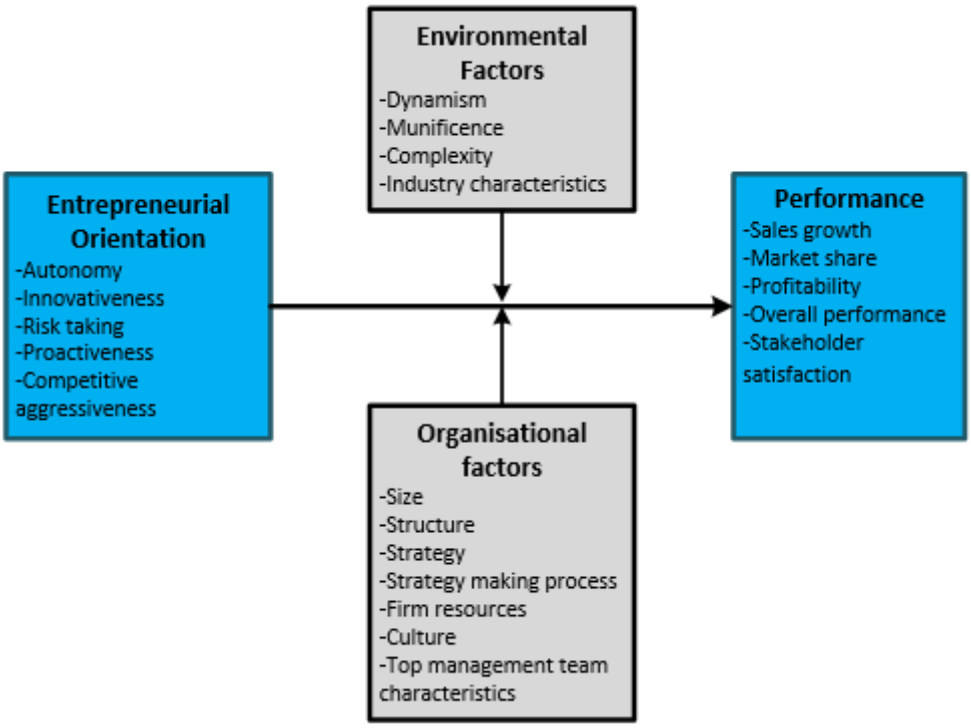
Entrepreneurial orientation (EO) is the strategy-making process followed by decision makers to enact the organisation's strategy, sustain the business' vision and create a competitive advantage (Rauch et al., 2009). According to Lumpkin and Dess (1996), EO comprises the processes, styles and methods followed by an organisation to act entrepreneurially. Herr and Anderson (2014) trace the EO concept to the original work of Mintzberg (1973) and Khandwalla (1976), who both argue that a firm's performance is dependent on the strategic choices, its attributes and the environment in which it operates. One of those organisational attributes being whether or not an organisation is entrepreneurial (Herr and Anderson, 2014). This was crystallised by Miller (1983), who proposed that an entrepreneurial strategy is where a firm chooses to pursue innovation and aggressiveness in a way in which it enters the market and the level of strategic and financial risks it tolerates in pursuit of new opportunities. Slevin and Covin (1990) then constructed a continuum in which EO can exist in an organisation from conservative to

being entrepreneurial. A firm that is entrepreneurial, or with high EO, exhibits entrepreneurial behaviours. Based on the work of Miller (1983), these behaviours are distilled into innovativeness, risk-taking and reactiveness (Rauch et al., 2009). This multi-dimensionality is captured and categorised in the definition by Herr and Anderson (2014), who posit that EO is a multidimensional construct consisting of non-interchangeable dimensions of entrepreneurial behaviours, (innovativeness and reactiveness), and managerial attitude towards risk (risk-taking).

Innovativeness is the ability of the firm to introduce new products, processes and business models in pursuit of strategy (Herr and Anderson, 2014). Reactiveness refers to the process of actively entering the innovative products into the market and seeking market leadership (Herr and Anderson, 2014). Lastly, risk taking is the willingness among strategic decision makers to fund projects and products, the outcome of which is uncertain (Herr and Anderson, 2014). In addition to the three dimensions of EO, Lumpkin and Dess (1996) include two more, namely autonomy and competitive aggressiveness. Autonomy is the ability of an organisation to have teams that are unencumbered by bureaucracy and able to undertake new product development and market entry activities (Lumpkin and Dess, 1996). Competitive aggressiveness is the ability to beat competition through posturing and being first in product launches and product innovations (Lumpkin and Dess, 1996).

Based on the preceding definition and explanation, EO is not just the concern of new entrepreneurial businesses. Lumpkin and Dess (1996) argue that being more entrepreneurial is a fundamental issue for all organisations. There remains a lack of empirical research to ascertain whether EO is more important for new firms or for more established firms (Lumpkin and Dess, 1996). Although it is widely believed that EO leads to greater organisational performance, Lumpkin and Dess (1996) propose a conceptual framework in Figure 3.8 below, which indicates that there are other intervening factors between EO and organisational performance.

Figure 3.2: Conceptual Framework of EO



Source: Lumpkin and Dess (1996:152)

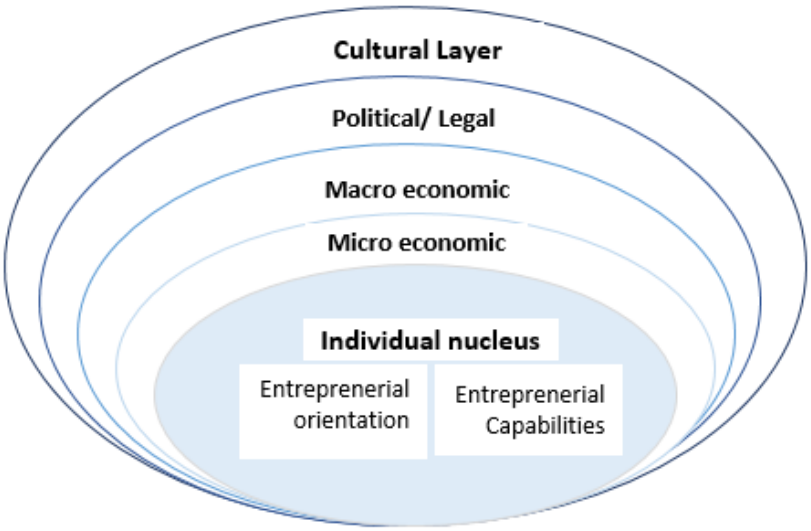
From the figure above, it is apparent that intervening between EO and performance are contingent variables to a firm's performance, namely environmental and organisational factors (Lumpkin and Dess, 1996). These contingent factors can be configured to optimise a firm's performance. To this point in this chapter, the issue of entrepreneurial performance has been explored at an organisation level.

This study, however, focuses on factors that orient an individual towards entrepreneurship, which is individual entrepreneurial orientation (IEO). IEO is important for this study as it provides an understanding of the background factors that influence ESE.

3.4 INDIVIDUAL ENTREPRENEURIAL ORIENTATION (IEO)

The concept of IEO could be seen as the application of EO theory on a personal level. Individual entrepreneurial orientation (IEO) is a concept that attempts to explore all the environmental factors that influence the entrepreneur (Kollmann et al., 2007). Ferreira et al. (2015) define IEO similar to organisational EO, as the ability to discover and exploit new market opportunities. Similar to the organisation, an entrepreneur's thought processes and behaviour are influenced by numerous environmental factors (Johannisson et al., 2002). According to Kollmann et al. (2007), the entrepreneur is situated in a social domain that he or she translates through cognitive processes to entrepreneurial performance. These external factors are macro factors such as culture, politics, legal and macro-economic factors and micro factors such as the micro-economic situation, personality and optimism. Kollmann et al. (2007) provides a concentric figure below to illustrate this.

Figure 3.3: The Factors Impacting Individual Entrepreneurial Orientation

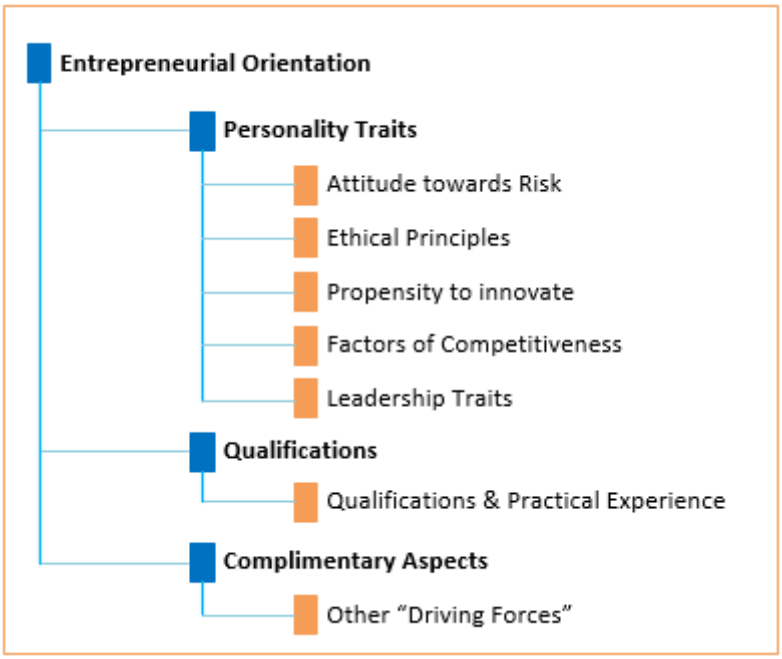


Source: Kollmann et al. (2007:15)

In providing additional insight into the macro and micro factors depicted in Figure 3.8 above, Kollmann et al. (2007) holds that people should not be encumbered by the hierarchical nature of the figure. The whole structure is, to an extent, symbiotic, which emphasises the reality that an entrepreneur exists in an ecosystem (Kuratko and Hoskinson, 2017). For instance, Kuratko and Hoskinson (2017) state that any entrepreneurial ecosystem expresses a symbiotic relationship between various stakeholders who provide solutions, not only to economic problems but also to social problems.

Ferreira et al. (2015) developed the tree criteria for IEO measurement that closely mimic the organisational EO. This is focused on the individual nucleus and divides it into 3 generic areas, namely personal traits, qualifications and complementary aspects (Ferreira et al., 2015). Under personality traits are: attitude towards risk; ethical principles; propensity to innovate; competitiveness and leadership traits (Ferreira et al., 2015). The qualifications category contains the entrepreneur's qualifications and practical experience, while the complementary aspect contains other driving forces (Ferreira et al., 2015). This is illustrated in Figure 3.4.

Figure 3.4: Tree of Criteria of IEO Measurement



Source: Ferreira et al. (2015:2695)

To an extent, ESE would be one of the personality traits of the entrepreneur under the Tree of Criteria Measurement. As ESE is the key focus of this study, the following sections define and explain the various constituent elements.

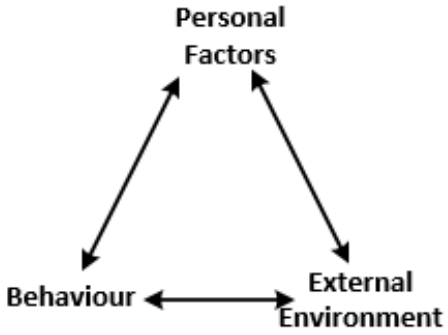
3.5 DEFINING ENTREPRENEURIAL SELF-EFFICACY

To gain an in-depth understanding of ESE, there is a need to first understand general self-efficacy. A number of scholars argue that there is no need for the domain-specific ESE, as general self-efficacy captures the individual perception in various fields (McGee et al., 2009). This study however, concurs with the contra opinion that self-efficacy is domain specific (Bandura, 1989).

Self-efficacy is an individual's estimate of his or her ''capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives'' (Wood and Bandura, 1989: 362). Self-efficacy purports that a person's assessment of their own abilities will influence their motivation, thoughts, behaviour and response to any challenge (Breakwell, 1992).

Self-efficacy is the main construct of Bandura's Social Cognitive Theory (Benight and Bandura, 2004). To understand self-efficacy, it is important to briefly discuss Social Cognitive Theory. The constituent elements of Bandura's Social Cognitive Theory argue that motivation and behaviour are a result of an interaction between cognitive, behavioural, personal and environmental factors (Crothers et al., 2011). The Social Cognitive Theory assigns "a central role to cognitive, vicarious, self-regulatory and self-reflective processes" (Wood and Bandura, 1989:362). This is summarised in the Triadic Reciprocal Determinism Model by Wood and Bandura (1989) depicted in Figure 3.5 below.

Figure 3.5: Triadic Reciprocal Determinism Model



Source: Wood and Bandura (1989:362)

In the Triadic Reciprocal Determinism model, Bandura (1983) argues that people are not the sole authors of their own behaviour and that other factors also come into play. There is an interplay between personal, behavioural and environmental factors, which interact to influence behaviour (Bandura, 1983). All the factors and events operate "as interacting determinants that influence one another" (Bandura, 1999:6). The environmental structure can be classified as imposed environment, selected environment and constructed environment. The imposed environment denotes the type of environment over which people have limited control but have leeway as to how they construe and react to it (Bandura, 1999). People construct their environments through their generative efforts and such construction of environment is characterised by a reciprocal interplay between personal and environmental factors (Bandura, 1999). Although the behavioural factors are shown as detached, Bandura (1999) argues that in reality people can only affect their environment through their behaviour. This means that behaviour is an interacting determinant rather that a detached by-product of a "behaviourless person" (Bandura, 1999). When people are acting on their environment, they are cognisant of the likely outcome of their behaviour (Bandura, 1999).

Benight and Bandura (2004) hold that central to human agency is people's self-efficacy, the belief that they can influence the events of their life. There are three key aspects to the cognitive process, namely modelling, encouraging people to use their talents effectively and increasing people's motivation through setting goals (Wood and Bandura, 1989). Wood and Bandura (1989) provide 3 key steps to effective behavioural modelling.

- The first step is paying attention to the information being presented. If a person is not attentive, there is no chance of them remembering and then using the information.

- The second step is retention of the information. To be able to use the information received for modelling behaviour, an individual needs to be able to remember the information. Remembering involves the process of transforming such information into information codes that are familiar to the person (Wood and Bandura, 1989).

- The third and last is behaviour production. This involves using the retained information from the previous step to model their behaviour. The individual then compares their behaviour to the desired behaviour and makes the relevant changes (Carroll and Bandura, 1987).

Wood and Bandura (1989) hold that for behaviour to be modelled, the observer must value the outcome of the behaviour and be motivated by the success of others in whom they believe (i.e. they are efficacious), they can reproduce the desired behaviour. Modelling is not simply mimicry of exemplary behaviour, it includes extracting the general guiding rules that will lead to success (Wood and Bandura, 1989). These rules are then applied in situations beyond, and sometimes dissimilar, to the observed behaviour.

The second aspect of Social Cognitive Theory is social persuasion, which refers to the encouragement that a person receives from other people and that needs to be realistic (Wood and Bandura, 1989). Encouragement should be realistic so that people do not have unrealistic expectations of their skills. Bandura and Wood (1989) advise allocating responsibilities in line with people's level of skills and slowly increasing the complexity of tasks. People need to then be measured against their previous performances and not through triumphs over others (Wood and Bandura, 1989).

People seek satisfaction by fulfilling their goals and are generally not content to remain where they are and constantly seek new challenges (Wood and Bandura, 1989). Goals set the direction in which any successful person moves. Goals should be SMART (Specific, Measurable, Attainable, Realistic and Time bound) and they assist a person to connect with their personal big picture, which should serve as a guide for day-to-day action (Edinger, 2012). Goals should be linked to what really matters in the person's life, otherwise there will be a lack of motivation and momentum to keep going during times of difficulty. There is also a need to create an emotional connection with these goals. To illustrate the importance of the emotional connection, Buck (1991) takes an extreme view by stating that "Everything that is real is emotional, the rational is our subsequent linguistically structured elaboration of that reality".

Self-efficacy is closely related to emotional intelligence, which is defined by Mortan et al (2014) as the mental process used to recognise, understand and manage personal and other people's emotions. In their research Mortan et al (2014) showed that the two dimensions of emotional intelligence, namely, regulation and use of emotions positively affect self-efficacy.

Through emotional and cognitive processes, people can exert a measure of influence over their lives (Wood and Bandura, 1989). Self-efficacy then, is people's beliefs about their own abilities to influence the events that affect their own lives (Bandura, 1994). Such beliefs influence the way in which they feel, think, behave and motivate themselves (Bandura, 1994). Schwarzer (2014) defines self-efficacy as a sense of control one feels over one's environment. Self-efficacy influences one's choice of activities one is willing to pursue (Zhao et al., 2005). Audia et al. (2000) make a qualification of self-efficacy by

defining it as "task-specific confidence" about their own capabilities to achieve high performance outcomes.

Self-efficacy is based on a person's perceived skills, that is, whether the person believes they have what it takes to achieve a certain desired outcome in a particular domain (Bandura, 1989). It is not a reflection of accomplishment, but is based on inferences from various sources of information (Schwarzer, 2014). Self-efficacy is domain specific (Eccles, 1994) and for this research that domain is entrepreneurship.

3.5.1 Entrepreneurial Self-Efficacy (ESE)

Entrepreneur self-efficacy is the confidence in performing those tasks that relate to the initiation and development of new enterprises (Chen et al., 1998). Drnovšek et al. (2010) define ESE as an "Individual's beliefs regarding their abilities to attain success and control cognitions for successfully tackling challenging goals during the business start-up process" (Drnovšek et al., 2010:329 – 330). There seems to be a lack of consensus regarding the definition of ESE (Drnovšek et al., 2010). One definitional approach takes the view that ESE is task-specific self-confidence (Baron, 2004; Boyd and Vozikis, 1994). Other researchers view it as the ability to master relevant cognitive, memory processing and behavioural traits to deal effectively with environmental requirements for establishing a successful business (Segal et al., 2002; Chen et al., 1998). This implies that ESE is more generalised and not task specific.

There is considerable literature arguing that domain specific and multi-dimensional ESE is irrelevant, as general self-efficacy is adequate (McGee et al., 2009). A number of studies that argue for multi-dimensional ESE end up providing a composite score (Chen et al., 1998). However, McGee et al. (2009) maintain that a composite measure of ESE fails to provide insight into the specific area of ESE that is most influential. Does, for instance, a high level in marketing or risk-taking influence entrepreneurial intentions more than, for instance, a high level of self-efficacy in finance? (McGee et al., 2009).

Although the theory of ESE is robust, it remains significantly under-developed (Torres and Watson, 2013). This study proposes a multi-dimensional definition of ESE, which is as follows:

ESE is the self-confidence that an individual has in conducting entrepreneurial tasks of opportunity recognition, creating appropriate business relationships, managing an entrepreneurial business and tolerating ambiguity and change.

This multi-dimensional definition is proposed because it sheds light on the various elements that are needed to develop a successful entrepreneurial organisation. From the suggested definition, ESE is seen as multi-dimensional and these dimensions are explored further in the section that follows.

3.6 THE CONSTITUENT DIMENSIONS OF ESE

Various authors have proposed various dimensions as making up ESE. According to Chen et al. (1998), ESE consists of five factors, namely marketing, innovation, management, risk-taking and financial control. McGee et al. (2009) advance slightly different dimensions, namely searching for special entrepreneurial opportunity, planning to establish a venture, marshalling relevant resources, implementation and financial management. The four key ESE variables are summarised in Figure 3.6. below.

Figure 3.6: Entrepreneurial Self-Efficacy's main constructs

The constructs shown above are central to the discussion of ESE in this research. These dimensions are discussed in the subsequent paragraphs.

3.6.1 Opportunity Recognition

Opportunity recognition is a process in which one searches for and identifies an opportunity that can be exploited (Baron, 2004). Most definitions of opportunity recognition include three key characteristics, namely potential economic value (profitability), newness and perceived desirability (Baron, 2004). Baron (2004) makes the following two propositions about sources of opportunity recognition, namely:

- that opportunities emerge from a confluence of conditions that did not exist before but are present now, for example changes in technology, economy, politics and demographic conditions and

- opportunities that arise from previous life experience, which may be specific to an individual. These life experiences are unique to individuals and assist them to make the necessary connections.

As opportunity recognition is deemed to be a cognitive process, it is significant to consider the following three questions (Baron, 2004). First, what is the process through which opportunities are initially identified i.e. how does a specific person identify a pattern in a myriad of changes in the world? Secondly, once the pattern has been identified, how does a person come to the conclusion that these patterns denote business opportunities? Thirdly, what specific mental structures obtained through experience, contribute to the ability to perceive a pattern in highly diverse conditions? (Baron, 2004).

There are two schools of thought that attempt to explain opportunity recognition, namely prototype models (Baron, 2004) and exemplar models (Hahn and Chater, 1997). The prototype model postulates that individuals construct mental prototypes e.g. the existence of a business opportunity. They then compare events and stimuli in the environment against their mental prototype. If the events are supportive of the mental prototype, then they conclude that the mental prototype (in this case "a business opportunity") exists (Baron, 2004). Using the exemplar model of pattern recognition, an individual stores in memory relevant examples (Hahn and Chater, 1997). They then compare a "business opportunity" against several examples they have previously encountered (as opposed to a single prototype as suggested by the prototype model) (Hahn and Chater, 1997).

According to Baron (2004), opportunity recognition does not include feasibility evaluation of the opportunity. Feasibility evaluation is an actual start-up process that is followed once a decision has been made to pursue a specific opportunity.

3.6.2 Relationship Self-Efficacy

Relationship Self-Efficacy is the individual's perceived ability to develop relationships with other parties, especially investors and people who can provide financing for the business (Barbosa et al., 2007). Other researchers (Kickul et al, 2009), refer to relationship self-efficacy as marshalling. Hanlon and Saunders (2007) highlight that the historical view of entrepreneurship as an individualistic pursuit is a misperception, as the entrepreneur needs support to be successful. Marshalling of resources involves the need to convince banks and investors to fund the business (Kickul et al., 2009). Obtaining access to resources involves asking others for money, labour and effort for a venture that has an uncertain future (Hanlon and Saunders, 2007).

To gain funding an entrepreneur needs to have business plans, formal comparisons between financial projections and what is typical in the industry and a detailed description of all the significant financial entries in the projections (Kickul et al., 2009). For this ESE task, the entrepreneur should have analytical

skills, forecasting skills and planning skills, especially in creating and presenting business plans to other parties (Kickul et al., 2009).

Central to relationship self-efficacy is social capital, which is defined by Hanlon and Saunders (2007) as the ability of actors to secure resources due to one's position in a network or social structure. Research into relationship self-efficacy, or in short, the social context of entrepreneurship, is becoming more complex and incorporating theories such as network theory (Aldrich and Whetten, 1981), social capital theory (Coleman, 1988), visionary leadership theory (Westley and Mintzberg, 1989) stakeholder theory (Freeman, 1984) and grounded theory (Glaser and Strauss, 1967).

According to Coleman (1988), social capital is generated through changes in the relationships among people to facilitate action. Social capital represents the value contained in the social relationships of people or groups of people (Gedajlovic et al., 2013). Nahapiet and Ghoshal (1998:243) define social capital as the "sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by individuals or social units". Entrepreneurship scholars believe that social capital has an essential role in the success of entrepreneurs and groups (Gedajlovic et al., 2013). In relationship self-efficacy the question is, how confident is someone of their own social capital to lead to entrepreneurial success?

Westley and Mintzberg (1989) hold the visionary leadership theory can be classified into three stages, namely repetition (idea), representation and assistance. Repetition recognises the value of perfecting skills due to long periods of time spent in repetition (Westley and Mintzberg, 1989). An idea will be meaningful to an entrepreneur, mostly due to their prior experience. Representation is about presenting with clarity the ideas that the individual had to other parties, with the intention to convince them to take a specific course of action (Westley and Mintzberg, 1989). Assistance is to do with the audience to which the idea is being presented, which needs to be receptive and willing to provide feedback that will assist in the co-creation of the idea (Westley and Mintzberg, 1989). In the context of relationship self-efficacy, the issue is, to what extent is the entrepreneur confident of his visionary leadership abilities?

Stakeholder theory proposes that numerous parties are responsible for the success of an organisation (Freeman and Mcvea, 2001). These parties include shareholders, employees, customers, suppliers, lenders and the society within which it operates (Freeman and Mcvea, 2001). The stakeholder theory arose from the numerous changes that were being experienced in the mid-1980s. In the context of relationship self-efficacy, entrepreneurs should be confident that they can sustain a good working relationship with the various parties (stakeholders) who are necessary for the success of the enterprise.

Grounded theory is centred on the notion that a theory deduced from real data is more reliable that a theory deduced purely from some logical formulation of the researcher (Glaser, 2017). Glaser (2017) argues that grounded theory is a way of arriving at a theory that is relevant for its use. In the context of ESE, an entrepreneur should, as far as possible, rely on actual data from reliable sources. This data could

be used to predict and explain behaviour, understand a situation, provide a perspective on behaviour and guide research into behaviour (Glaser, 2017). In the context or relationship self-efficacy, the question is, to what extent does an entrepreneur believe that his or her ideas are based on reliable data to make it more likely to succeed?

Aldrich and Whetten (1981) define a network as all units connected through a relationship and includes the whole population, despite the relationship that connects them. The challenge that researchers face in network studies is one of overwhelming complexity, especially if they attempt to include all relationships in the network (Aldrich and Whetten, 1981). Network studies can be simplified by reducing the study into action sets, organisational sets and partial networks, without loss of theoretical coherence (Aldrich and Whetten, 1981). (Organisational sets refer to those organisations with direct links, action sets are temporary relationship formed to achieve a goal and partial networks are simply incomplete networks.) In relationship self-efficacy the question is, to what extent a person's networks can support his / her entrepreneurial goals.

Dubini and Aldrich (1991) distinguish between personal and extended networks, as a useful approach to better comprehend social networks. The personal network is said to contain all those people with whom the entrepreneur has direct relationships, such as partners, suppliers, customers, bankers, family members etc. Extended network refers to the relationships between all members of the organisation, (managers, owners and employees), and other relevant people (Dubini and Aldrich, 1991). Social networks are not static but are created through the entrepreneur's proactive and strategic activities (Hanlon and Saunders, 2007).

Support provided by the entrepreneur's network is not only financial, it also involves intangibles such as emotional support and acting as a sounding board (Hanlon and Saunders, 2007). Research by Hanlon and Saunders (2007) found that new ventures rely significantly on family and friends.

Dubini and Aldrich (1991) hypothesize that effective entrepreneurs should be able to:

- chart their present network and identify productive and symbolic relationships;
- regard an effective network as crucial for the long term success of the business and
- maintain and stabilise networks to increase their reliability and effectiveness.

If relationships are treated as static, that is, an entrepreneur's relationship self-efficacy is evaluated in terms of the existing network, there is a risk that one will miss important relationships that will appear later in the entrepreneurial process (Hanlon and Saunders, 2007). According to Dubini and Aldrich (1991), an entrepreneur should set aside time to grow their network through creating pragmatic and instrumental ties and emotional, spontaneous bonds, that is, to set aside time to increase their relationship self-efficacy.

3.6.3 Managerial Self-Efficacy

Managerial self-efficacy is the individual's perceived ability to control the finances and other economic resources of the business (De Noble et al., 1999 and Chen et al., 1998). As a manager of one's own organisation, the entrepreneur is a disseminator, figurehead, negotiator, liaison and spokesman (Pavett and Lau, 1983). These competencies, according to Campo (2010), can be broadly classified as leadership, organisational skills and political competence. As an information disseminator, the entrepreneur psychologically empowers people in the organisation by creating meaning and opportunities for self-determination and by improving the level and effect of competence (Demirel, 2014). This is only fully realisable when information is moving freely and shared by employees (Demirel, 2014). Consistent with this, a study by Demirel (2014) found that effective information dissemination has a positive influence on a company's performance.

As a figurehead, the entrepreneur has a duty to fulfil legal and social responsibilities (Novak, 2017). According to Beenen and Barbuto Jr (2014), negotiation is one of the most important skills for an entrepreneur to develop. Central to being a good negotiator is the ability to balance one's own self-interest with the interest of the other party (Beenen and Barbuto Jr, 2014). The liaison responsibility involves receiving information and interrogating contacts and subordinates (Demirel, 2014). As a spokesman, the entrepreneur speaks on behalf of his organisation (Demirel, 2014). The entrepreneur as a spokesman extends organisational contacts, even outside his/ her areas of jurisdiction, by crossing cultural boundaries in order to effectively communicate with people the organisation needs to reach (Baijal and Alam, 2015).

Kickul et al (2009) holds that people with analytical skills are generally more comfortable with managerial self-efficacy. The reason why analytical individuals will feel more efficacious to perform managerial tasks is because they prefer working in a structured environment (Kickul et al., 2009).

When an entrepreneur has a high level of managerial self-efficacy, he will encourage employees to share their ideas with regard to improvement with the intention of making the relevant changes (Fast et al., 2014). Entrepreneurs who are efficacious are not worried about other people's ideas being better than theirs. Significant research indicates that numerous benefits emerge when the entrepreneur or manager is open and responsive to ideas and suggestions from people within the organisation (Fast et al., 2014). In contrast, low managerial self-efficacy leads to reduced solicitation of ideas, denigration of employees and unwillingness to implement ideas advanced by others (Fast et al., 2014). Where an entrepreneur has low managerial self-efficacy, employees usually feel disempowered and cease contributing as much as they can, which usually culminates in the business losing key employees.

3.6.4 Tolerance Self-Efficacy

Tolerance self-efficacy is the individual's ability to work productively under ambiguity, pressure, stress, constant change and at times, conflict (De Noble et al., 1999). According to Hvide and Panos (2014),

past research has found that people who are risk averse become employees and those with tolerance self-efficacy become entrepreneurs. Pihie and Akmaliah (2009) found that there is a strong relationship between risk tolerance and the desire for autonomous decision-making. Although studies indicate that entrepreneurs have a higher propensity for risk-taking than non-entrepreneurs, it has been found that they avoid situations of extreme risk (Pihie and Akmaliah, 2009). It has also been found that people who participate in the stock market and have higher levels of debt are more likely to become entrepreneurs (Hvide and Panos, 2014). However, research conducted by Hvide and Panos (2014) reflects that company start-ups by more risk tolerant individuals are less profitable, grow less and have lower survival rates. In other words, more risk averse individuals are less likely to initiate a business but if they do, they operate better performing companies.

In expounding on the risk attitudes of entrepreneurs and non-entrepreneurs, Parry et al. (2014) hold that entrepreneurs do not view themselves as less risk averse than non-entrepreneurs. They are just more optimistic and view the probability of failure as relatively lower than non-entrepreneurs. However, in the same study by Parry et al. (2014), where they evaluated the changes in risk aversion after a one-year, hands-on entrepreneurial course, they found no significant change in risk aversion among males but significant changes among females. In explaining the results, Parry et al. (2014) posited that females most probably initiate a business at a cultural disadvantage, which explains the differences in change. Parry et al. (2014) also highlight the size of the sample as a weakness in their study. There have been mixed results with regard to whether females are more risk averse than males. However, based on an meta-analysis of 150 studies that utilised various data collection methods, Byrnes et al. (1999) concluded that women are more risk averse than men.

From the discussion in this section it can be seen that exploring ESE multi-dimensionally provides greater insight into its constituent elements. It also prepares the groundwork for areas that need to be targeted if an individual wishes to improve upon them. This is especially important in light of ESE's contribution to entrepreneurial behaviour and cognitive processes, such as the formation of entrepreneurial intentions (EI), as explored further in the following section.

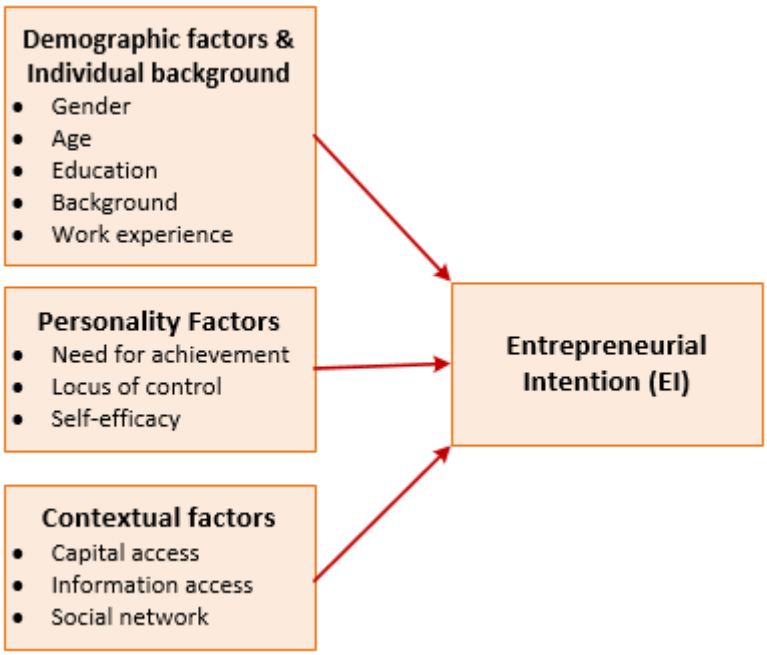
3.7 RELATIONSHIP BETWEEN ENTREPRENEURIAL INTENTIONS AND ESE

Bird (1988) defines entrepreneurial intention (EI) as a state of mind that directs an individual's attention, experience and other action towards a business concept that is necessary to form an organisation. In other words, the desire to own a business (Thompson and University of Bath, 2009). It is believed that entrepreneurial intention precedes entrepreneurial behaviour (Bird, 1988) and is a reliable predictor of entrepreneurial behaviour (Koe, 2016). People will only become entrepreneurs if they demonstrate a sufficient level of entrepreneurial intent (Koe, 2016). However, a high level of desire (EI) does not always materialise into entrepreneurial action. In their research, Iwu et al. (2016) found that the majority of the respondents had a desire to initiate their own business but highlighted the challenges they faced in turning their intention into reality. Challenges such as the lack of financial resources, unfavourable

economic conditions and a lack of support and assistance. This is why a number of entrepreneurial researchers, such as Brännback and Carsrud (2017) proposed that there is a need for a non-volitional push event to convert intentions into entrepreneurial action.

There are several factors that influence EI, such as individual demographic factors and personality traits and contextual elements such as the availability of information and access to capital and social networks (Indarti and Krinstiansen, 2003). These factors are illustrated in Figure 3.7.

Figure 3.7: Factors that Influence Entrepreneurship



Source: Indarti and Krinstiansen (2003:84).

In terms of demographic factors, factors such as gender and age have an impact on the inclination to become an entrepreneur (Amos and Alex, 2014). It is usually argued that females are less likely than males to become entrepreneurs (Amos and Alex, 2014). In terms of age, research has shown that people with the highest intention to become entrepreneurs are between 25 and 45 years of age (Amos and Alex, 2014). It should be highlighted that a number of researchers, such as Stefanović and Stošić (2012), argue that the relationship between age and EI is not always positive. Many older people have lower EI than younger people due to higher risk aversion, as they have much more to lose in the event of the business failing. Davidsson (1989) highlights that there is a positive relationship between EI and other demographic factors such as education, employment experience, growth aspirations and the occupation of one's parents.

Personal factors are the unique psychological factors that incline people to choose entrepreneurship rather than formal employment (Amos and Alex, 2014). This includes factors such as the need for achievement, locus of control and propensity for taking risks (Phan et al., 2012). This line of thought

argues that entrepreneurs have a higher need for achievement, internal locus of control and risk taking propensity (Amos and Alex, 2014).

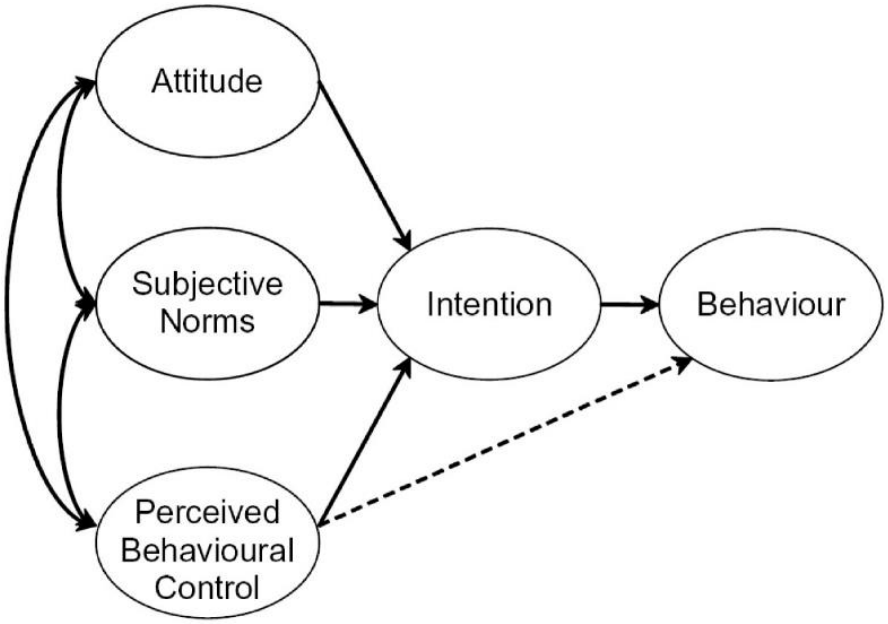
Contextual factors are those environmental elements that influence an individual to be entrepreneurial (Amos and Alex, 2014). These factors include administrative complexities, accessibility of resources, institutional infrastructure, economic factors, political factors and culture (Kristiansen and Indarti, 2004). Administrative complexities are those factors that make it more difficult to initiate a business (Amos and Alex, 2014). Having access to information with regard to managing a business successfully and having easy access to finances both increase IE (Amos and Alex, 2014). Kristiansen and Indarti (2004) opine that it is not the actual availability of information or finances that influences EI but perceived availability. What matters is the entrepreneur's perception of the contextual factors, whether or not they are supportive to his/ her entrepreneurial quest.

Entrepreneurship is planned behaviour, which is why cognitive research in intentional models has gained considerable popularity (Sabah, 2016). The two main theories used to explain EI are the theory of planned behaviour (Ajzen, 1991) and the Shapero-Krueger model (Hindle et al., 2009).

3.7.1 The Theory of Planned Behaviour

The theory of planned behaviour is an extension of the theory of reasoned action (Sabah, 2016). The theory of planned behaviour by Ajzen (1991) is built out of three main constructs, namely attitude, subjective norms and perceived behavioural control, as illustrated in Figure 3.8 below.

Figure 3.8: The Theory of Planned Behaviour



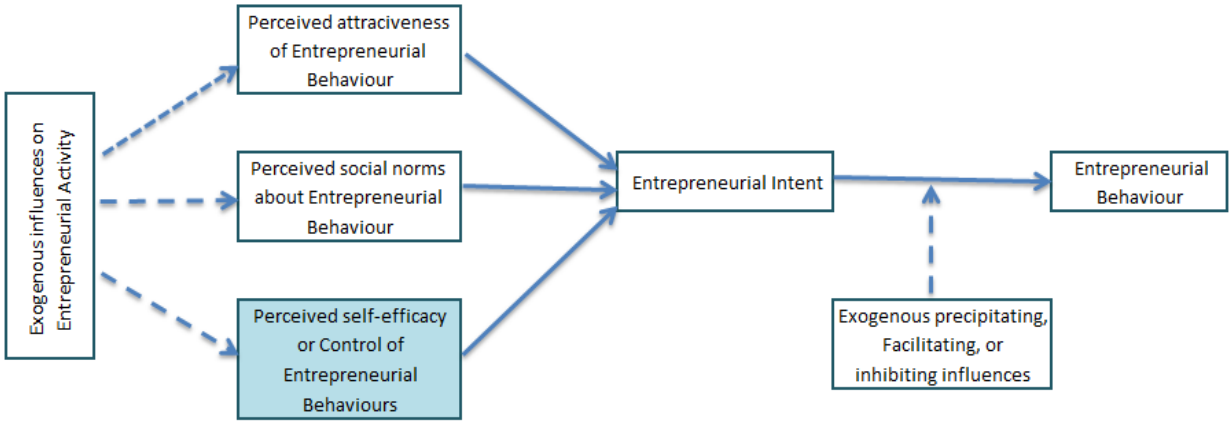
Source: Ajzen (1991:182)

Attitude refers to an individual's belief that a certain behaviour will make a contribution towards his/ her life (Ajzen, 1991). In the case of entrepreneurship, it is a belief that starting a business will improve

one's life. Subjective norms refers to all factors around the individual's beliefs, for example cultural norms, social networks, beliefs and more (Ajzen, 1991). The social norms are a function of the normative beliefs of significant others, such as family members, friends and co-workers weighed against one's desire to comply with these beliefs (Elfving et al., 2009). The social norms provide a guide of what is desirable in the community or culture (Elfving et al., 2009). In an entrepreneurial context, cultural norms, social networks and personal beliefs significantly influence an individual's attitude as to whether or not initiating a business is a desirable course of action. The third construct, perceived behaviour control, concerns an individual's belief about how easy or difficult it is to carry out the desired behaviour (Ajzen, 1991). In the context of entrepreneurship, one's belief in one's own ability to carry out an entrepreneurial task is entrepreneurial self-efficacy (ESE).

Dreiling (2015) states that the theory of planned behaviour control is a good predictor of behavioural intention and subsequent behaviour. If one or two of the constructs of EI are unfavourable, a person is less likely to perform the desired act, compared to someone else who has all the constructs as favourable (Dreiling, 2015). The theory of behavioural control, when adapted for targeted entrepreneurial behaviour, is illustrated in Figure 3.9 below.

Figure 3.9: Intentions Towards Entrepreneurial Behaviour: The Theory of Planned Behaviour



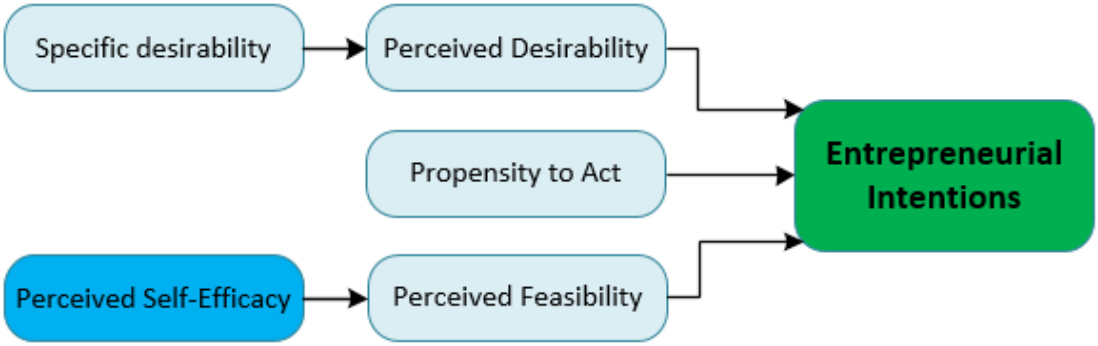
Source: Krueger and Carsrud (1993:323)

From the figure above, it can be seen that in terms of the adapted Theory of Planned Behaviour, ESE is a contributing factor to entrepreneurial intention. The contributory nature of ESE is relatively similar to how it is characterised in the Shapero-Krueger model below.

3.7.2 The Shapero-Krueger Model

The Shapero-Krueger entrepreneurial intentions model has its roots in social psychology, which attempts to predict the intentions of students to act entrepreneurially (Carsrud, 2015). The desire to become an entrepreneur, according to the Shapero-Krueger model, is influenced by his propensity to act, the perceived feasibility and the perceived desirability, as illustrated in Figure 3.10 below.

Figure 3.10: The Shapero-Krueger Model of Entrepreneurial Intent



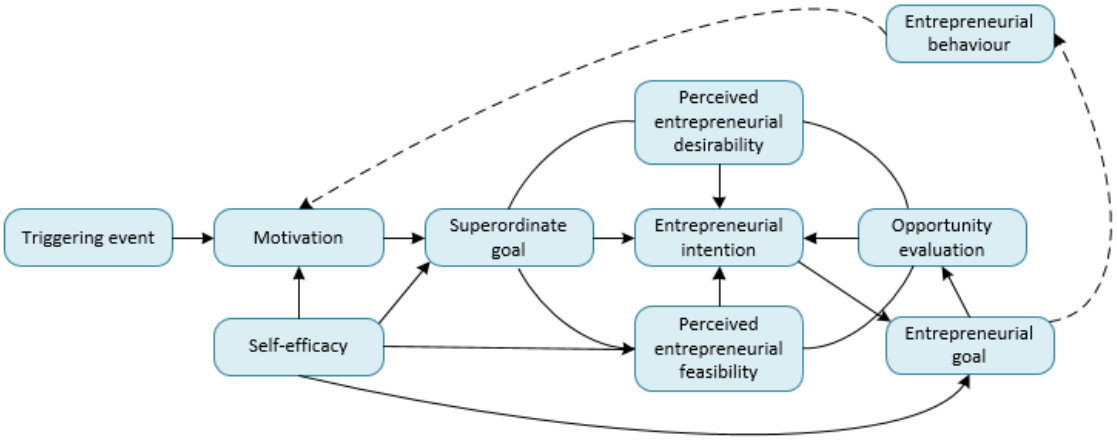
Source: Hindle et al. (2009:39)

Intentions do not automatically create the desire to act; it takes significant ESE to reach the threshold to trigger desired behaviour (Carsrud, 2015). If a student has a high level of EI, his/her ESE also grows, which reflects a reciprocal relationship between EI and ESE (Carsrud, 2015).

3.7.3 The context-specific Entrepreneurial Intentions Model

Brännback and Carsrud (2017) highlighted the limitations of the two models of intention in the sense that they exclude motivations, goals and opportunity evaluation. They then propose a composite EI model, the context-specific entrepreneurial intentions model, illustrated in Figure 3.11 below, which they argue is necessary for research into EI.

Figure 3.11: The Context-Specific Entrepreneurial Intentions Model



Source: Brännback and Carsrud (2017:77)

The level of EI affects the entrepreneur's behaviour and this is intermediated by entrepreneurial goals (Brännback and Carsrud, 2017). The transition from goals to entrepreneurial action is likely triggered by non-volitional events, (job loss, income shortfall due to family's changing needs or circumstances), which may befall the potential entrepreneur (Elfving et al., 2009). Some entrepreneurs spend a long time intending to start something, but nothing happens due to a lack of a non-volitional push event (Brännback and Carsrud, 2017). It is also important to highlight that even where there in an intention,

there could be factors preventing a person from transforming intention into action (Gollwitzer and Brandstätter, 1997).

Goals have a far-reaching impact on the perception of entrepreneurship desirability and feasibility (Elfving et al., 2009). Although motivation and self-efficacy do not influence the formation of entrepreneurial intentions, they are included in the context-specific entrepreneurial intentions model, as they influence the likelihood that EI would lead to entrepreneurial action (Brännback and Carsrud, 2017).

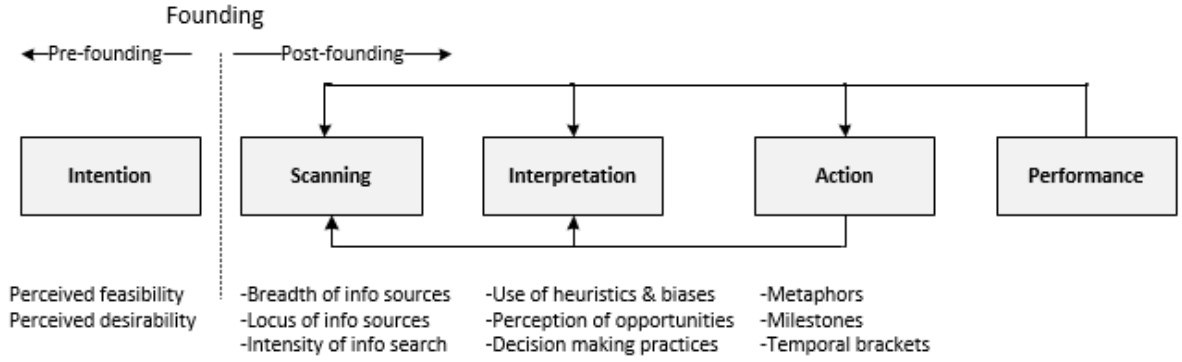
In a critique of current EI models, Hindle et al. (2009) argue that they are narrow, self-perceptual and overly cerebral. They indicate limited concern with the human conditions and social context that influence the thinking process (Hindle et al., 2009). Entrepreneurial thinking encompasses more than just thoughts, the reality is a complex interaction between environment and thinking (Hindle et al., 2009). Intention is a mind game, which involves experience that is situated in the social environment (Hindle et al., 2009). This calls for an understanding of Albert Bandura's 1986 work in social cognition, "Social Foundations of thought and Action: A Social Cognitive Theory" (Hindle et al., 2009).

Whether or not people pursue their goals depends on two key factors, the way in which the goal content is framed and the goal related activities are regulated (Gollwitzer and Brandstätter, 1997). It is important to explore, albeit briefly, the way in which ESE and EI are potentially converted into action, which is the primary purpose of understanding them. Gollwitzer and Brandstätter (1997) state that the process of fulfilling one's wishes is a four stage process beginning with converting a desire into a goal. If the desired goal is habitual, then action proceeds without delay. However, if the goal is new or difficult, action is stalled by the multiplicity of ways to achieve that goal, the situation is not conducive, negative emotions or the opportunity to act is lost or ignored (Gollwitzer and Brandstätter, 1997). The second stage is beginning the goal-directed action, then ending the goal-directed action and closing with an evaluation of what has transpired (Gollwitzer and Brandstätter, 1997).

Gollwitzer and Brandstätter (1997) argue that in order to increase the likelihood of a goal being completed, there is a need to come up with implementation intentions after formulating the goal. In their research, Gollwitzer and Brandstätter (1997) found that for difficult goals, 62% of their participants successfully implemented difficult projects, as long as they had implementation intentions. This is in contrast to 22% who managed to implement without implementation intentions for the same difficult goals (Gollwitzer and Brandstätter, 1997).

The EI to enterprise formulation was presented in the Forbes model (entrepreneurial cognition continuum) (Hindle et al., 2009). In that model, the most critical antecedent are Shapero's Entrepreneurial Event Model and the work of Bird (1988) on entrepreneurial intentions. The Forbes model is divided into two stages, pre-founding and post-founding, as shown in Figure 3.6 below.

Figure 3.12: The Entrepreneurial Cognition Continuum



Source: Hindle et al. (2009:37)

The pre-founding stages emphasise two key intention concepts, namely perceived feasibility and perceived desirability (Hindle et al., 2009). In the post founding stages a sense-making framework proceeds from scanning and interpretation through to action and performance (Hindle et al., 2009). During the scanning stage, elements such as breadth, locus of information and intensity of the search are critical. Under the interpretation phase emphasis is on the use of heurists and biases, perception of opportunities, threats and decision-making practices (Hindle et al., 2009). The action stage emphasises the use of metaphors, milestones and temporal brackets (Hindle et al., 2009).

Having located ESE as a precedent to EI (Hindle et al., 2009), it is important to explore the value of understanding ESE in the entrepreneurial process.

3.8 THE VALUE OF UNDERSTANDING ESE

ESE is considered as the most direct and immediate determinant of performance and the reason that nascent entrepreneurs engage in the firm creation process (Hechavarria et al., 2012). Those with higher ESE will exert greater effort when pursuing a specific goal, which will lead to a higher likelihood of that goal being achieved (Hechavarria et al., 2012). ESE is not just important in the start-up process, but also during the implementation of various strategies to make the business successful (Hechavarria et al., 2012). In a study by Hechavarria et al. (2012), it was found that nascent entrepreneurs with higher ESE were less likely to give up at the first sign of difficulty.

Self-efficacy is important as it determines what one thinks he/ she can do and the way in which they wish to do it (Brännback and Carsrud, 2017). Motivation is important because it determines the kind of goals people set for themselves (Brännback and Carsrud, 2017). In this way, self-efficacy influences personal goals and a high level of self-efficacy makes a person more motivated to continue (Brännback and Carsrud, 2017).

It is important to note that ESE is not a stationary concept as it changes. According to Drnovšek et al. (2010), ESE beliefs about one's ability to successfully initiate a business are different from ESE beliefs about the capabilities needed to grow a business.

Initially, the individual should have higher self-efficacy beliefs about his/her competence to start a new business, which would boost the entrepreneurial intent (Drnovšek et al., 2010). The higher the beliefs of competence, the more energy allocated to pursuing start-up goals, such as idea generation and opportunity identification (Drnovšek et al., 2010). Wilson et al. (2007) hold that people with higher entrepreneurial self-efficacy tend to believe that they have an idea upon which they can successfully act upon. If high ESE is complemented by high entrepreneurial intentions (EI), there is an increased probability of that person being involved in an entrepreneurial activity (Boyd and Vozikis, 1994).

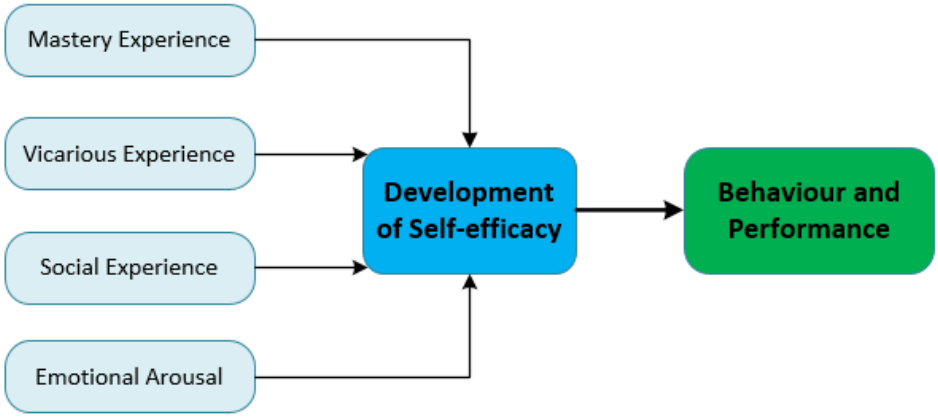
According to Campo (2010), self-efficacy can be used to identify vocational inclinations in people. In a study of career self-efficacy, it was found that self-efficacy was the most reliable predictor of a male's intentions to pursue a career in predominantly female professions. In research undertaken by Lent et al. (1994) into self-efficacy, it was found that self-efficacy was strongly related to career preferences, career choice goals and job performance. Self-efficacy is the key mediator between a person's career capabilities and interests (Lent et al., 1994). All these findings indicate that self-efficacy can be used to predict career-related intentions (Campo, 2010). In a study by Zhao et al. (2005), it was found that people who chose to become entrepreneurs has high ESE. ESE is also important in understanding those people who decide to participate in entrepreneurial education programs (Bagheri et al., 2013), something of interest to this research. The predisposition to start an entrepreneurial business is driven by an individual's beliefs about entrepreneurship. Where do these beliefs come from? In the next section the sources of ESE are explored.

3.9 SOURCES OF ESE BELIEFS

A person who believes that he/she can cause an event, takes a more determined life course and is more motivated than a person who believes that he/she is subject to fate (Schwarzer, 2014). In the past two decades self-efficacy has been found to be an effective predictor of students' learning and motivation (Zimmerman, 2000). Higher levels of ESE have been shown to be directly linked to an individual's intention to initiate an entrepreneurial business (Arora et al., 2013).

It is important to know the sources of ESE in order to influence ESE. In general, self-efficacy is influenced by mastery experience, vicarious experiences, social experiences and emotional arousal (Bandura, 1994). The relationship between self-efficacy and the factors through which it is influenced are illustrated in Figure 3.13 below.

Figure 3.13: Sources of Self-Efficacy

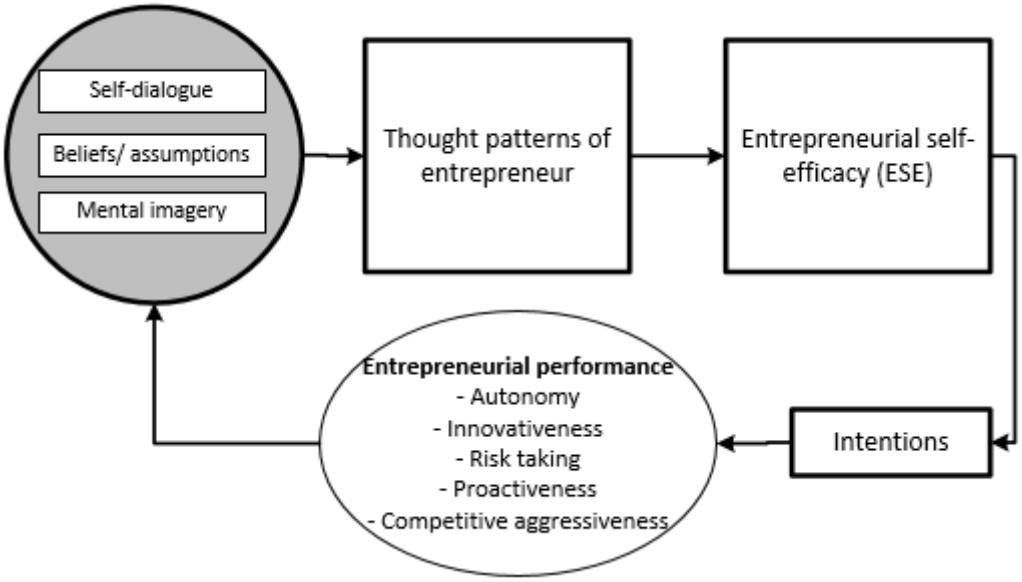


Source: Adapted from Novack and Vasquez (2013)

Mastery experience refers to the judgement of skill based on previous achievements and experiences related to that specific task (Bandura, 1994). Vicarious experience is the increased self-confidence gained from watching another person perform a similar or related task (Bandura, 1994). Self-efficacy increases vicariously, mostly due to referential comparison that is, the way in which the person sees themselves performing a task compared to the person performing a similar task (Bandura, 1997). Social experience or persuasion refers to the confidence of competence someone feels after being encouraged that they are capable of performing the task by a person who is important to them (Bandura, 1997). However, Bandura (1997) argues that social experience is not a strong source of efficacy when compared to mastery experience. Emotional arousal are the emotions that someone feels while they are performing a task, which assists them to make a judgement call about their self-efficacy with regard to that particular task (Bandura, 1997). Wood and Johnson (2016) identified another source of self-efficacy as physiological and emotional states. They argue that whether a person is in a positive, neutral or negative emotional state influences the level of self-efficacy they feel about the task at hand.

Neck et al. (1999) posit that ESE can arise from thought self-leadership. Thought self-leadership is the process of influencing or leading oneself through the purposeful control of one's own thoughts (Neck et al., 1999). It is based on an individual maintaining a constructive thought pattern. These thought patterns lead to thought habits, which influence the perception and the choices that are made (Neck et al., 1999). This is illustrated in Figure 3.14 below.

Figure 3.14: Thought self-leadership view of entrepreneur performance



Source: Neck et al. (1999:482)

In the thought leadership model, entrepreneurial performance is the extent to which the entrepreneur exhibits any of the five entrepreneurial orientation dimensions, namely autonomy, innovativeness, risk taking, proactiveness or competitve aggressiveness (Neck et al., 1999). It is important to note that self-dialogue, beliefs and mental imagery are significantly influenced by culture, which in turn influences ESE, a concept explored in the next section.

3.10 CULTURAL INFLUENCES ON ESE

The ongoing Global Entrepreneurship Monitor (GEM) study continues to indicate that the level of entrepreneurship varies per country (Mueller and Dato-on, 2013). The underlying logic supporting this argument about culture and entrepreneurship is that culture shapes certain traits, which support or at times detract from entrepreneurial activities (Mueller and Dato-on, 2013). Culture is known to shape entrepreneurial behaviours, such as individual entrepreneurial orientation, start-up attempts and innovative activities (Bowen and De Clercq, 2008).

Cultures are generally classified according to six cultural dimensions established by Hofstede (1980). Hofstede's six dimensions are power distance (PDI), individualism versus (vs) collectivism (IDV), masculinity vs femininity (MAS), the uncertainty avoidance index (UAI), long term orientation vs short term orientation (also known as pragmatic vs normative, PRA) and indulgence vs restraint (IVR). The description of each cultural dimension is presented in Table 3.1 below.

Table 3.1: Hofstede's Cultural Dimensions

#	Cultural Dimension	Description
1.	Power Distance (PDI)	The degree to which people are comfortable interacting and influencing those in higher authority. In other words, the extent to which people accept established power structures.
2.	Individualism vs Collectivism (IDV)	The extent to which personal needs and goals are prioritised vs the needs and goals of the clan, organisation or group.
3.	Masculinity vs femininity (MSA)	Whether the society has different rules for men and women. Masculine societies have different rules for men and women and these differences are less pronounced in feminine cultures.
4.	Uncertainty Avoidance Index (UAI)	How comfortable people are to change the way they live or work. If they prefer tried and tested systems and methods, then the culture has a high uncertainty avoidance.
5.	Pragmatic vs Normative (PRA)	Pragmatic cultures have a long term future orientation and perseverance values compared to normative cultures, which have a present term and short term past orientation.
6.	Indulgence vs Restraint (IVR)	Allowing satisfaction, enjoying life and having fun versus regulating life through strict norms.

Findings on the ways in which culture influences entrepreneurship is to an extent conflicting (Wennberg et al., 2013). A few reports, for example De Clercq et al. (2010), report a positive relationship between collectivism and entrepreneurship, contrary to the established way of thinking of numerous other researchers. Wennberg et al. (2013) argue that these outlier results are usually a result of the different treatment of culture, whether it is treated at macro level (national) or micro level (individual level). In highly collective societies, group loyalty is favoured more than maximising income (Wennberg et al., 2013). In this way collectivism suppresses ESE, whereas in highly individualistic cultures, more individual exuberance is tolerated (Wennberg et al., 2013). In their research, Wennberg et al. (2013) found that there is a significant difference in the likelihood to initiate a business between people with high levels of ESE who live in either collective or individualistic societies.

Shane's (1993) innovation research found that uncertainty avoidance was negatively related to innovation in the two periods he studied, 1975 and 1980. However, individualism was found to be positively associated with innovation in 1975 but not in 1980 (Shane, 1993). Power distance was found to be negatively associated with innovation for 1975 but not for 1980 (Shane, 1993). In commenting on these results, Hayton et al. (2002) posited that the association between entrepreneurship and a cultural dimension is unstable. A complex interaction seems to exist between entrepreneurial oriented characteristics such as entrepreneurial values, new firm formation, EI and beliefs concerning entrepreneurship (Hayton et al., 2002).

In most countries a gender gap exists in the field of entrepreneurial activity (Mueller and Dato-on, 2013). Hofstede (1998) argues that there seems to be a universal cultural differentiation, where men generally stress ego oriented goals, (such as entrepreneurship), while women are more socially oriented and prefer

roles that reward cooperation and nurturing. The GEM survey found that in most of the 41 countries surveyed, men are more likely to be involved in entrepreneurial activities than women (Mueller and Dato-on, 2013). The gender gap is at its highest in high-income countries and lowest in low-income countries (Mueller and Dato-on, 2013). This reality implies that comparatively, males have higher ESE than females, on average, especially in high-income countries.

An earlier study conducted in 25 countries in Europe, Africa, Asia and the Americas by Williams and Best (1982) also revealed that there is significant cultural stereotyping, with males being deemed as more oriented towards entrepreneurship. This tendency is greater among developing countries (Williams and Best, 1982). In a study by Mueller (2004) it was found that there were no significant differences in female preference of entrepreneurship between countries that are highly masculine and those that are more feminine, a result which is counter intuitive. In commenting on this counter intuitive result, Mueller (2004) proffered the explanation that the result could have been due to the fact that the sample comprised only university students, who might not be culturally representative of their national culture. These students could be from elite families whose cultural values are not significantly different from people in more developed countries.

Drawing from Hofstede (1980), it is argued that entrepreneurship is more prevalent in countries that are low in certainty avoidance and power distance (Mitchell et al., 2014). Wennberg et al. (2013) hold that in societies with a high level of uncertainty avoidance, individuals will reflect more fear of initiating a business. In comparison, societies with low levels of uncertainty avoidance should have people with higher ESE. In their research, Wennberg et al. (2013) did not find a significant difference in the likelihood of starting a business between countries with high uncertainty avoidance and those with low uncertainty avoidance.

Using Hofstede's (1980) cultural dimension is complicated in South Africa due to the significant variation between racial groups (Vogt and Laher, 2009). In fact Vogt and Laher (2009) highlights that cross cultural replicability has not always been found between different racial groups, in as many as four factors. This limits the insight a person can draw from the overall cultural score, without specific reference to racial group or economic status.

Different cultures have different performance orientations. Some cultures highly value the performance of everyday work and highlight the importance of work-related accomplishments i.e. a society where a Protestant work ethic is highly valued (Wennberg et al., 2013). These cultures are presumed to value training and development and results more than people, competition and materialism. Cultures that value a Protestant work ethic are associated with higher entrepreneurial activities.

The Protestant Work Ethic

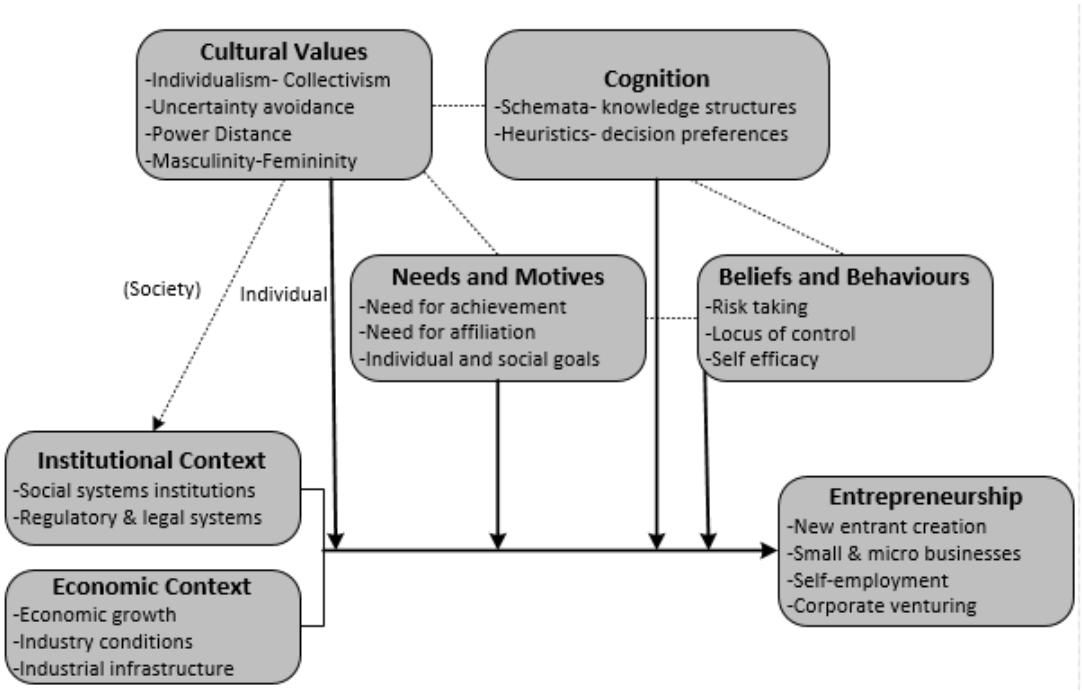
A Protestant work ethic is a term that was introduced by Weber (1930), which expounded the influence of Calvinism on ordinary people's day to day performance. A Protestant work ethic was premised on the thinking that the highest form of moral obligation was for a person to fulfil his day-to-day duties, as opposed to Catholicism, which emphasised monastic life and the cycle of sin-repentance-forgiveness. In Calvinism a person's life was predestined and the sure way to show the world that you were chosen was to perform your worldly activities. Success in your worldly pursuit was a sure way to show you were one of the chosen. Whatever wealth you accumulated was accepted as long as it was accompanied by a sober, industrious career and not used to support a life of idle luxury or self-indulgence. Calvinism therefore supplies the moral energy and drive for a capitalist entrepreneur.

(Weber, 1930).

In this context, cultures with a Protestant work orientation (Weber, 1930) will have people with higher ESE. Offering a contrary view, Wennberg et al. (2013) argue that fear of failure could dog cultures with a Protestant work ethic, thus confining people to their day jobs with a lower risk of failure. In reality, entrepreneurs have lower average incomes when compared to formally employed people with comparable skills, qualifications and experience (Wennberg et al., 2013).

Hayton et al. (2002) provide a model that highlights the way in which culture influences various aspects of entrepreneurship. This model is shown as Figure 3.15 below and was developed after a review of empirical studies into the relationship between entrepreneurship and culture. According Hayton et al. (2002), culture manifests itself in four forms, namely needs and motives, beliefs and behaviours, cognition and cultural values, as depicted in Figure 3.15. Culture is not a causal agent of entrepreneurship but rather a catalyst and the model depicted in Figure 3.15 indicates that cultural characteristics transform and complement institutional and economic contexts (Hayton et al., 2002).

Figure 3.15: A model of Culture's Association with Entrepreneurship



Source: Hayton et al. (2002:47)

Research into entrepreneurship indicates that institutions play a critical role in the level of entrepreneurship activity (Hayton et al., 2002). This includes the lending policies of financial institutions, prioritisation of industrial development goals etc. (George and Prabhu, 2000). Social institutions reflect and reinforce cultural values, which in turn shape institutions (Hayton et al., 2002). Interpreting Figure 3.15 cultural values affect entrepreneurship directly and also indirectly by influencing cognition, needs and motives, beliefs and behaviours. All these factors have an effect on entrepreneurship. Of interest to this study is self-efficacy, which is part of the beliefs and behaviours in the model depicted above. In other words, culture influences ESE, which in turn affects EI and ultimately entrepreneurial activity.

It is not only culture that has significant influence over ESE; gender also has an effect. Research by Wennberg et al. (2013) confirmed that gender influences a person's ESE and this is explored in the next section.

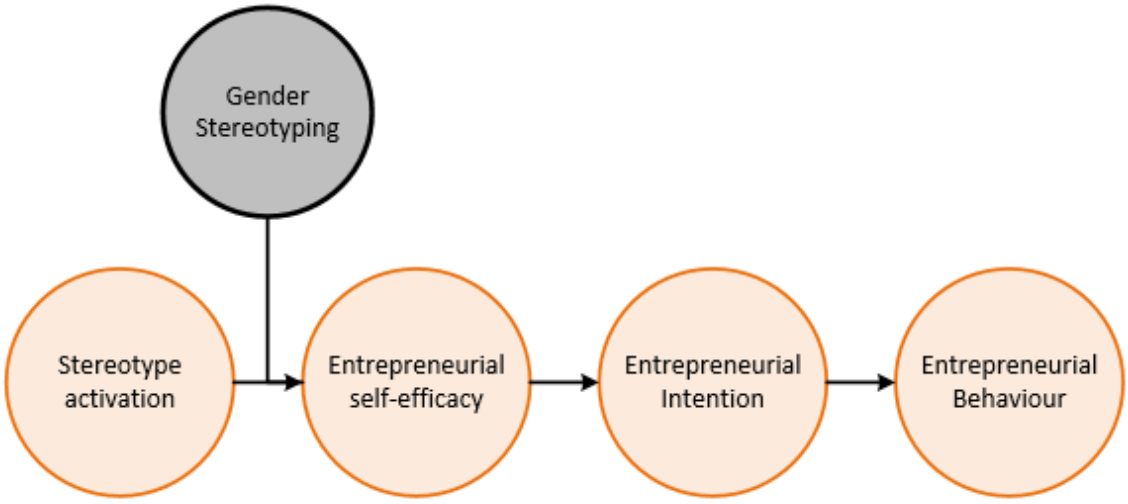
3.11 HOW GENDER INFLUENCES ESE

After their longitudinal study on educational influence on EI and gender, Shinnar et al. (2014) recommended that any study of ESE should incorporate gender. This was due to a statistically significant change in ESE in males after a semester-long entrepreneurship course, with no statistically significant change being found among females. Heilman (1983) asserts that people generally desire jobs that are consistent with what culture stereotypically designates as being suitable for their gender. Gender stereotypes are not only descriptive of the way in which a particular gender should behave but also prescribes the manner in which men and women should behave (Heilman, 2001). A study by Gupta et

al. (2009) confirmed that generally people (both men and women) associate entrepreneurship with masculine characteristics. Even those women with higher EI had a higher male-gender identification of themselves (Gupta et al., 2009).

It is important to highlight that while people are born as either male or female biologically, a person's gender is a socialisation, which commences immediately after birth (Sweida and Reichard, 2013). Gender stereotyping in society tends to influence individual attitudes and behaviours automatically (Sweida and Reichard, 2013) and in many ways unknowingly. In highly masculine cultures the law is used to amplify these differences (Hofstede, 1980). The effect of gender stereotyping is illustrated in Figure 3.16 below.

Figure 3.16: Theoretical Model of Gender Stereotyping and ESE



Source: Adapted from Sweida and Reichard (2013:298)

Discussions in entrepreneurship research highlight that the glaring difference between men and women with regard to ESE and EI are mostly to do with gender characterisation (Gupta et al., 2009; Carter et al., 2001; Greer and Greene, 2003; Marlow and Patton, 2005). In other words, scholars hold that socially constructed and learned ideas about gender and entrepreneurship limit women's ability to acquire relevant entrepreneurial traits and skills (Gupta et al., 2009). Gender stereotyping even influences the nature and size of the ventures developed by women (usually smaller than those initiated by men in the service sector), which unfortunately further reinforces the stereotype (Gupta et al., 2009).

In a study of Israeli high school students conducted by Bergman et al. (2011), it was found that while boys' ESE increased, girls indicated reduced ESE. A study by Dempsey and Jennings (2014) found a significantly lower ESE of young women in their sample, which they attributed to lower levels of entrepreneurial experience, a lesser desire to be entrepreneurs and a higher likelihood of receiving negative feedback with regard to an opportunity evaluation task. Sweida and Reichard (2013) found that by reducing male stereotyping of high growth enterprises, women's intention to engage in high growth activities in their ventures increased.

Any study of ESE or EI in South Africa should consider gender, as women still face gender-specific barriers in their entrepreneurial activities, such as limited access to finances, negative socio-cultural attitudes, gender discrimination and bias, lack of education and attempting to balance family life and business (Botha, 2014). The apartheid legacy of women that were not allowed to own property, (which can be used as collateral), and also needed their husbands' permission to enter into financial agreements need to be contended with (Botha, 2006). In a study by Phillips et al. (2014), it was found that the government's programmes aimed at supporting female entrepreneurs faced challenges such as lack of awareness, not meeting the financial and other needs of women and that women generally distrust the external agents mandated to assist them with their SMMEs.

The South African reality with regard to women and entrepreneurship is consistent with Gupta et al. (2009), who argue that gender stereotyping might have insidious consequences for women because they are deterred from entrepreneurship, not only because they see themselves as less entrepreneurial, but also because resource providers, families and the men in their lives may not support their desire to own a business. Women's educational journey into entrepreneurship should be cognisant of the need to reduce gender stereotyping (Sweida and Reichard, 2013). Sweida and Reichard (2013) recommend specific focus on women during entrepreneurial training in order to enhance their ESE through mastery experience, vicarious learning, verbal persuasion and improving their physical and psychological health.

Notwithstanding gender's influence on ESE, it is important to explore the way in which ESE contributes to the start-up process.

3.12 THE CONTRIBUTION OF ESE IN THE START-UP PROCESS

The intended end result of any cognition and motivation of nascent entrepreneurs is to take action in the real world, for example launching a venture or organisation (Bird and Schjoedt, 2017). The very nature of organisations is rooted in action. Thoughts, intentions and intelligence without action do not create any value (Bird and Schjoedt, 2017). However, entrepreneurial behaviour is an outcome of the cognitions and emotions of entrepreneurs (Bird and Schjoedt, 2017). The preceding sections have dealt comprehensively with the cognitive process, which precedes entrepreneurial action. This section discusses the way in which ESE is employed in the start-up process.

Shook et al. (2003) provide a useful four-step organising model of the business start-up process that can be used to explore the impact of ESE during start-up. These four steps are presented below.

1. **Intent formation** - this refers to the entrepreneur's motivation to actively pursue a goal of initiating a business.

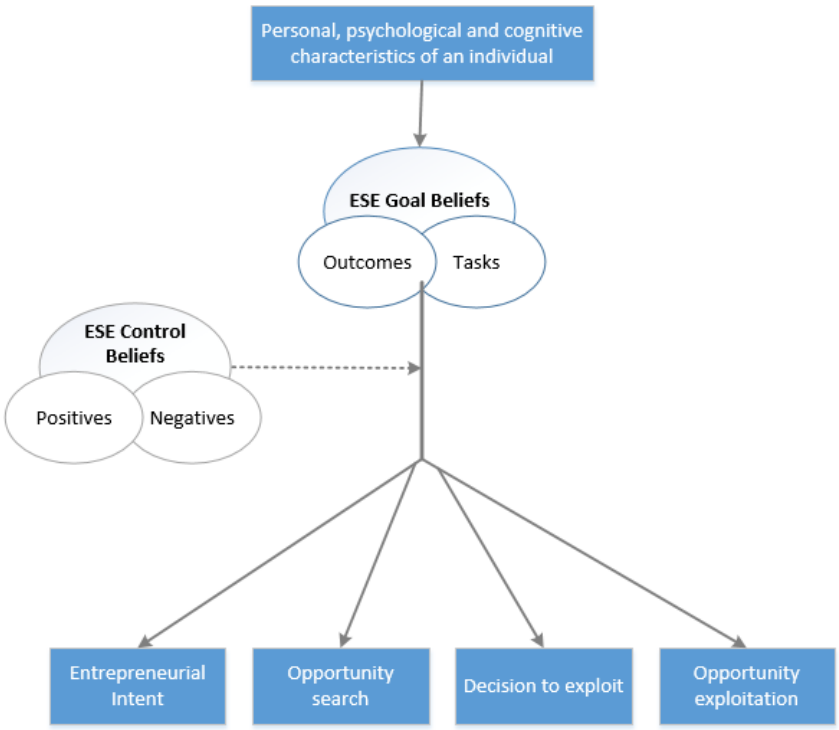
2. **Opportunity identification** - the process used by the entrepreneur to search and find opportunities that may be exploited.

3. **Decision to exploit** - the commitment by the entrepreneur to exploit the identified opportunities.

4. **Venture creation** - the process of assembling the resources and infrastructure for the business start-up.

Above-mentioned steps are consistent with the social cognitive theories explored in the previous section, namely Bandura (1997), the Shapero-Kruger model of entrepreneurial intent and the theory of planned behaviour (Ajzen, 1991). Wincent et al. (2010) recommend using the model by Shook et al. (2003) to highlight the role that ESE has at various stages of the start-up process. This is summarised in Figure 3.17.

Figure 3.17: The Role of ESE in the Business Start-Up Process



Source: Wincent et al. (2010:338)

The specific relationships between various dimensions of ESE and the start-up process are discussed below.

3.12.1 The Role of ESE During the Entrepreneurial Intent Formation Stage

The relationship between ESE and EI has been described at length in section 3.5 above. The theory of planned behaviour control was used to indicate that ESE is an antecedent to entrepreneurial intention (Ajzen, 1991). This was explored by Krueger and Carsrud (1993), who highlighted that perceived self-efficacy or control of entrepreneurial behaviours leads to EI. The Shapero-Kruger model also highlights that perceived self-efficacy is an antecedent to perceived feasibility of an enterprise, which in turn is an antecedent to EI. The context-specific entrepreneurial intention model by Brännback and Carsrud (2017) highlights the same issue. To summarise all this, Wincent et al. (2010) hold that the higher the strength

of one's beliefs in one's own capabilities to initiate a business (ESE), the more likely they will be to start-up (EI) and mobilise resources to pursue start-up goals.

3.12.2 The Role of ESE During Opportunity Identification

Opportunity identification is the ability to identify a good concept or idea and transform it into a business concept that adds value to consumers and can generate revenue for the entrepreneur (Karimi et al., 2016b). According to Cardon and Kirk (2015), the highest level of ESE is required during opportunity identification. This is because identifying opportunities and initiating a venture require the greatest level of persistence, especially when compared to growing an existing enterprise (Cardon and Kirk, 2015). If an opportunity is not identified, then there is no entrepreneur (Karimi et al., 2016b). Identifying an opportunity requires the entrepreneur to activate his or her socio-cognitive skills and engage with the relevant tasks, which demands relatively high levels of ESE (Wincent et al., 2010). If an entrepreneur fails to identify an opportunity or establish a firm, then the firm cannot operate (Cardon and Kirk, 2015).

3.12.3 The Role of ESE and the Decision to Exploit

Once an opportunity has been identified, the entrepreneur has to make a decision on whether to exploit or forego the opportunity (Choi and Shepherd, 2004). Shook et al. (2003) noted that there are both psychological and cognitive processes involved in an entrepreneur's decision to exploit an opportunity. This can lead to internal conflicts that need to be resolved (Shook et al., 2003). Wincent et al. (2010) posit that the final decision will be guided by the entrepreneur's perceived self-efficacy to realise expected outcomes. De Jong and Jeroen (2013), found a high positive correlation between perceived behaviour control (ESE) and decision to exploit. This means that entrepreneurs pursue an opportunity in which they believe they will be successful (De Jong and Jeroen, 2013).

3.12.4 The Role of ESE During Opportunity Exploitation

Finally, the exploitation of an opportunity involves activities such as planning, finding resources, marketing and selling (Shook et al., 2003). This can also be the most difficult stage in the entrepreneurial process. It is at this stage that a substantial number of entrepreneurs fail. In South Africa, 70% to 80% of SMMEs fail in the first 5 years (Friedrich, 2016; Fatoki, 2014a). According to Burger (2016), this is among the highest failure rates in the world. Wincent et al. (2010) propose that those entrepreneurs with the highest level of ESE are likely to persist, even when faced with numerous setbacks.

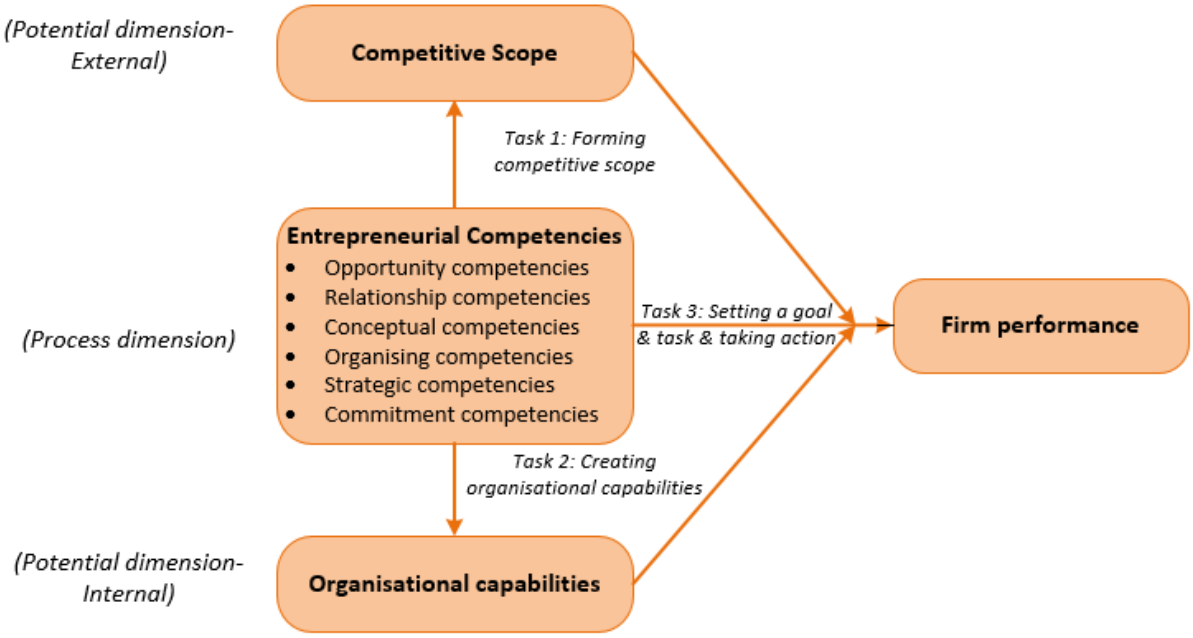
3.13 ESE AND BUSINESS PERFORMANCE MODELS

It is important to briefly explore entrepreneurship performance models, as Man et al. (2002) argue that performance is the ultimate criteria of success. Seven performance models are explored in this study with regard their treatment of ESE where applicable. The models are the Man, Lau and Chan performance model (Man et al., 2002), the Glancey, Greig and Pettigrew model (Perks and Struwig, 2005), the Van Vuuren and Neiman model (Van Vuuren and Nieman, 1999), Wickham's model (Wickham, 2001), the Ucbasaran, Westhead and Wright model (Ucbasaran et al, 2004), the Daroch and Clover model (Daroch and Clover, 2005) and the Perks and Stuwig model (Perks and Stuwig, 2005). These models are briefly discussed below.

3.13.1 The Man, Lau and Chan Performance Model

Man et al. (2002) drew upon two concepts to design their business performance model, namely competitiveness and the competence approach. The model consists of four main constructs of competitive scope, organisational capabilities, entrepreneurial competences and performance (Man et al., 2002). Competitiveness is usually applied in the large business domain but Man et al. (2002) adapted it to small businesses in their model. In terms of entrepreneurial competencies, Man et al. (2002) summarised the various competences found in entrepreneurship literature to only six, as depicted in Figure 3.18.

Figure 3.18: Man, Lau and Chan Model



Source: Man et al. (2002:134)

The competitive scope represents how much breadth there is for the business to act that is the opportunities as subjectively identified by the entrepreneur (Man et al., 2002). Organisational capabilities are the internal capabilities, such as innovative ability, ability to maintain high quality

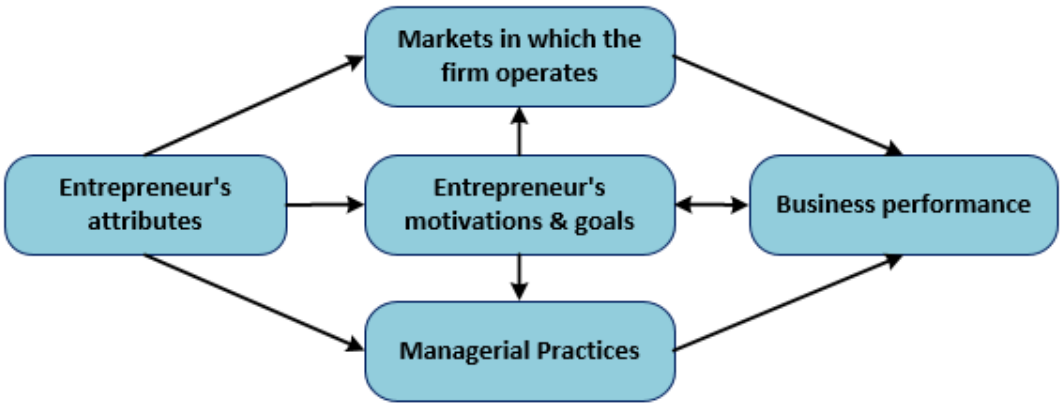
products, cost effectiveness and the ability to create a flexible organisational structure. According to Man et al. (2002), the firm's performance dimension should be concerned with issues such as efficiency, profitability, growth and relative performance. However, to sustain long term performance, the entrepreneur must set goals and undertake relevant tasks to achieve those goals (Man et al., 2002).

This model does not take motivation or ESE into consideration.

3.13.2 The Glancey, Greig and Pettigrew Model

The Glancey, Greig and Pettigrew Model was developed from a study by Glancey et al. (1998) of small businesses in Scotland. The model attempts to distinguish itself from other models by adopting a different perspective of business performance (Glancey et al., 1998). The model is based on a sample of 20 independently owned small businesses, which were controlled by one individual and had fewer than 25 employees each. The model proposes that an entrepreneur's personal characteristics determine his or her motivation and objectives, which in turn determine business performance. This is illustrated in Figure 3.19 below.

Figure 3.19: Glancey, Greig and Pettigrew Model



Source: Glancey et al. (1998:255)

According to the Glancey, Greig and Pettigrew model presented above, business performance is mediated through markets operated by the business and managerial practices, which are employed in the business (Glancey et al., 1998). There is a dynamic relationship between entrepreneurs' goals and motivation and business performance, as business performance will provide a guide for entrepreneurs to revise their goals and influence their motivation (Glancey et al., 1998).

This model makes provision for the role of ESE through entrepreneurs' attributes. These attributes, although not specified, may include ESE, which is the focus of this study.

3.13.3 The Van Vuuren and Neiman Model

The primary question that Van Vuuren and Nieman (1999) sought to answer with their model was how to improve entrepreneurial performance through a training intervention? In light of this purpose, Van Vuuren and Neiman's model targets the design of entrepreneurship educational programmes (Van Vuuren and Nieman, 1999). These researchers believe that if this model is implemented in an educational programme it could lead to an increase in entrepreneurial performance. According to them, entrepreneurial performance is a function of motivation (M), entrepreneurial skills (ES) and business skills (BS). This led them to a dynamic linear model presented below.

EP = a + bM[cES X d BS]

The model is a multiplicative model, which holds that entrepreneurial performance (EP) is a product of motivation (M) X entrepreneurial skills (ES) X business skills BS (Van Vuuren and Nieman, 1999). The constants a, b, c and d are a reflection that the entrepreneur brings a level of relevant skills to the training, although not at the required level (Van Vuuren and Nieman, 1999). According to Van Vuuren and Nieman (1999), a programme should be designed to incorporate all the constructs of the formulae and also be cognisant of the business' evolution stage. According to Sirpolis (1977), these evolution stages are incubation, infancy, breakthrough and maturity. Through the use of personal motivation and business skills, ESE could be implied. This model is similar to Wickham's model that is discussed in the next section.

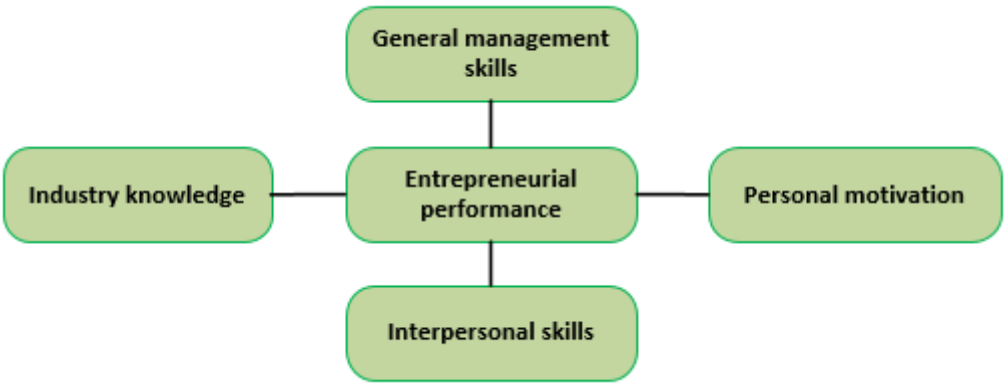
3.13.4 Wickham's Model

According to Wickham (2001), entrepreneurial performance is a function of general management skills, industry knowledge, personal motivation and people skills. This can be expressed in the following formula:

Performance = W (Industry, Management, Interpersonal, Motivation)

This formula was further reduced into a model, as shown in Figure 3.20 below.

Figure 3.20: Wickham's Model of Entrepreneurial Performance



Source: Wickham (2001:55)

In terms of the figure above, entrepreneurial performance is a result of industry knowledge, general managerial skills, personal motivation and interpersonal skills.

This model does not explicitly deal with ESE.

3.13.5 The Ucbasaran, Westhead and Wright Model

Ucbasaran et al. (2003) identify two types of human capital, namely general human capital and specific human capital. General human capital consists of education, age and gender, while specific human capital consists of managerial capabilities, technical capabilities, business ownership experience and attitudes. In their research it was found that although general and specific human capital were both important in opportunity identification, only specific human capital was found to be related to opportunity pursuit. They henceforth identified 3 capabilities that are relevant for an entrepreneur's success as the entrepreneurial role, the managerial role and the technical role. Therefore:

Entrepreneurial success = U (entrepreneurial skills, managerial skills and technical skills)

As can be seen in the formula, ESE is omitted but the general discussion by Ucbasaran et al. (2003) includes attitudes and part of the specific human capital that is related to business start-up.

3.13.6 The Darroch and Clover Model

The Darroch and Clover performance model is a result of research undertaken by Darroch and Clover (2005) into the quality of business success among SMME agri-businesses in KwaZulu Natal. The owners were asked to rate four components of entrepreneurial quality, namely, preference to be self-employed, motivation type, energizer behaviours and personal and external factors (Darroch and Clover, 2005). Preference to be self-employed is influenced by personal factors such as the desire for independence, resistance to authority and aversion to organisational hierarchy, as espoused in most organisations (Darroch and Clover, 2005). Motivation refers to the intrinsic and extrinsic motivation to become an entrepreneur. Extrinsic motivation being a desire to achieve material goals while intrinsic

motivation is derived from the pleasure derived when performing a specific task (Darroch and Clover, 2005). The energizer behaviours include the ability to identify new products, business opportunity evaluation skills, negotiation and problem solving skills (Darroch and Clover, 2005). External factors affect all entrepreneurs regardless of education, experience, motivation or family support (Darroch and Clover, 2005).

Chimucheka (2014) presents the Darroch and Clover performance model in terms of the following formula:

Entrepreneurial Success = D (Motivation, Entrepreneurial skills and Business skills)

Although ESE is not addressed directly by this model, self-efficacy is a predictor of motivation (Zimmerman, 2000). This means that this model too accounts for ESE, albeit indirectly.

3.13.7 Stewig's Model

The Stewig's Model was derived from research conducted by Perks and Struwig (2005) aimed at identifying the skills necessary to grow a micro enterprise into a small business. The result was that they identified 13 skills that were important for a micro business to grow into a small business (Perks and Struwig, 2005). The skills they identified were self-development, networking, relationship marketing, time management, stress management, presentation, negotiation, general business management, record keeping, financial management, computer skills, management skills and risk management (Perks and Struwig, 2005). The entrepreneur does not need to exhibit all these entrepreneurial skills, but the more skills they possess the higher the likelihood that their enterprise will grow (Perks and Struwig, 2005). In line with the formulation in the previous section, entrepreneur performance can be expressed as:

Entrepreneurial performance = f (self-development, networking, relationship marketing, time management, stress management, presentation, negotiation, general business management, record keeping, financial management, computer skills, management skills and risk management).

This model does not take self-efficacy into account directly but it can be argued that if one is committed to self-development aimed at the other 12 factors, one's ESE will increase.

Of the seven models of entrepreneurial performance discussed above, only the following four take self-efficacy into account, albeit indirectly via motivation. The relevant models that take account of self-efficacy through motivation are the Glancey, Greig and Pettigrew model, the Van Vuuren and Neiman model, Wickham's model and the Daroch and Clover model. According to Zimmerman (2000), self-efficacy is a predictor of motivation.

If an entrepreneur has a high level of self-efficacy, the assumption can be made that they believe in their own abilities to achieve task-specific goals (Bandura, 1997) and are likely to persist in the face of

adversity (Wincent et al., 2010). In other words, ESE assists entrepreneurs transform their beliefs into effort, which in turn improves firms' performance (Miao et al., 2017). ESE is also expected to be a better predictor of a firm's performance than general self-efficacy due to task specificity (Miao et al., 2017). The effect of ESE on performance can also be attributed to the fact that entrepreneurs with a high ESE set more challenging goals (Hmieleski and Barom, 2008), which implies that they attempt to achieve more for their businesses than those with lower ESE.

In a study conducted by Hmieleski and Barom (2008), it was found that ESE exerted positive growth influences, especially in a dynamic environment characterised by constant change. When moderated for optimism, they found that highly optimistic entrepreneurs with high ESE performed worse in a dynamic environment. In a dynamic environment, there is a high information processing burden to be successful, characterised by the need to exploit information asymmetry between buyers and sellers (Hmieleski and Barom, 2008). A high level of optimism can lead to overconfidence, which can in turn lead to unnecessary risk-taking (Hmieleski and Barom, 2008). On the contrary, the effects of ESE are limited in stable environments (Hmieleski and Barom, 2008).

A study by Ngek (2015) in South Africa concluded that ESE has an indirect relationship with performance, mediated by an entrepreneurial mind set and openness to experience. They define entrepreneurial mind-set as the ability to quickly sense, act and mobilise resources, even under conditions of uncertainty (Ngek, 2015). Openness to experience is the ability by the entrepreneur to view challenges as learning experiences and avenues to broaden knowledge (Ngek, 2015).

Openness to experience is consistent with Bauman's treatment of the current time as 'liquid modernity' (Elliott, 2013). In the current era of 'liquid modernity', people struggle to find their place in society and are dogged by feelings of uprootedness, anxiety and insecurity, which are all by-products of globalisation (Elliott, 2013). People see themselves less as pilgrims in deep search for life's meaning and more as tourists in search for transitory experience (Elliott, 2013). People's attention is further fractured by social media, which increases connectedness but prevents people from doing thoughtful work, which Newport (2016a) refers to as deep work. According to Newport (2016a), 'shallow work' is not cognitively demanding and can be performed while distracted but these efforts rarely produce new value. It is in this era that entrepreneurial education and training aims to provide the right experiences to enhance ESE, which in turn would lead to students intending to initiate their own successful businesses. How then can ESE be increased?

3.14 WAYS TO INCREASE ESE

According to Chen et al. (1998), ESE is a fairly stable construct that requires a systematic and continuous effort to bring about change. Patterns of behaviour like ESE build over a considerable period of time and it is therefore necessary to provide repetitive experiences for change to occur (Carsrud and Brännback, 2009). Added to repetition is the need to provide differentiated activities so that everybody gets a chance to be successful in their training (Carsrud and Brännback, 2009).

Research by Malebana and Swanepoel (2014) suggests that ESE can be developed through entrepreneurship education. Education can enhance ESE by influencing the sources of self-efficacy, that is, mastery experience, vicarious experiences, social experience and emotional arousal education (Malebana and Swanepoel, 2014). Educators should incorporate those elements that have a bearing of sources of ESE in their programs (Malebana and Swanepoel, 2014).

According to Wilson et al. (2007), mastery experiences can be developed in ESE through the use of long and meaningful apprenticeships. In research conducted by Esmaeili et al. (2014) into nurse training, two important features supposedly characterise the apprenticeship, namely the need to repeat theoretical learning in a real world setting and gaining practical knowledge in an apprenticeship setting. This assists students to relate what they are learning to the real world, where such information can be applied. Apprenticeships also teach other subtle skills, such as social and behavioural skills, which cannot be leant in a classroom setting effectively (Esmaeili et al., 2014). The same assumption can be made about entrepreneurship. If students wish to develop a practical skill such as entrepreneurship, they need to be exposed to the entrepreneurial world to see the way in which their classroom learning can be applied in a real world setting and create value.

ESE can be enhanced through vicarious experiences using role models to enhance the desirability and feasibility beliefs of the entrepreneurship student (Laviolette et al., 2012). Role models have a significant and positive impact on ESE (BarNir et al., 2011). Role models transfer preferences for an occupation through a nascent entrepreneur's observation of them or interaction with them (Hoffmann et al., 2015). Role models could occur naturally, for example being born to entrepreneurial parents or having a close relative who is an entrepreneur. Role models also can occur in a contrived set-up, for example during training. In a contrived training set-up, successful entrepreneurs from the community can come to the classroom and share either their technical expertise or their experiences with students (Chen et al., 1998).

It should be highlighted that gender is an important mitigating factor. An entrepreneurial father has greater influence on the desire of boys to become entrepreneurs and the same applies to an entrepreneurial mother on girls (Hoffmann et al., 2015). According to Laviolette et al. (2012), the impact on similarity of gender is more significant for females than males. According to Hoffmann et al. (2015), the significance of gender partially explains why there are more male entrepreneurs than female. Historically there are more men who are entrepreneurs than women, thus propagating that trait to their

sons through socialisation, as described above. This idea can be developed further by postulating that females respond more positively to female entrepreneurs than to male entrepreneurs.

Role models do not need to be physically present, as fictitious role models, testimonials and narratives can also be influential (Laviolette et al., 2012). Social comparison research indicates that people do not compare themselves to all models, but factor in their own goals, their personal involvement and capacity to process information (Laviolette et al., 2012). In light of this, it is important to promote role models among entrepreneurship students who are similar to the student population (Hoffmann et al., 2015). Laviolette et al. (2012) recommend that when identifying a role model, it is important to include similarity in factors such as age, educational background and gender, even in the materials that are presented as case studies. On the issue of role models, Laviolette et al. (2012) highlight that negative role models also have a place in pedagogy. They provide a balanced view and assist student to become more creative in their strategies.

Social persuasion is a potent way of influencing ESE. Social persuasion, according to Redmond and Slaugenhoup (2016), is influenced by the encouragement and discouragement a person experiences regarding his or her own performance. The impact of social persuasion is influenced by the perceived expertise, trustworthiness and attractiveness of the source (Wood and Johnson, 2016). According to Brink and Wood (1997), verbal persuasion is not as influential on change as other sources of self-efficacy, such as mastery experience and vicarious experience. According to Pillis and Reardon (2007), for social persuasion to work, it needs to satisfy at least one of the following factors: appropriateness; consistency with the receiver's scheme and effectiveness in bringing about the desired outcome. If one cares more about what others think, then appropriateness is likely to influence one's behaviour (Pillis and Reardon, 2007). It should be noted that social persuasion does not occur in a vacuum. There are factors such as effects of mood and fear, which affect the effectiveness of persuasion (Wood, 2000). A particular mood can also pre-dispose one to process information in a particular way (Wood, 2000). For instance, happy people could process information in a way that allows them to maintain their mood, while fear-inducing persuasion appeals are effective as long as the fear-inducing appeal is not beyond the ability of the recipient to cope (Wood, 2000). If the fear appeal is beyond the coping mechanism of the recipient, then the message will likely be rejected (Wood, 2000). For instance, to increase ESE, the message could appeal to the fear of being unemployed and not being able to earn an income.

The emotional states that arise when one is thinking of performing an activity provide an indication of whether or not the activity will be successful (Schutte et al., 2008). Negative emotions such as anxiety, worry and fear could lead to failure (Schutte et al., 2008). According to Bandura and Adams (1977), stressful situations create emotional arousal, which in turn affects a person's self-efficacy and their ability to cope with the situation at hand. Fear of failure could significantly reduce one's ESE. This fear could lead to avoidance behaviours (Schutte et al., 2008), such as failing to take the necessary action that could lead to increased entrepreneurial self-efficacy. As entrepreneurship is perceived as inherently

uncertain and risky, fear of failure is a key inhibiting factor of ESE (Wennberg et al., 2013). Fear leads to uncertainty avoidance (Wennberg et al., 2013) and preference of more predictable outcomes, such as being formally employed. However, Cacciotti and Hayton (2015) indicate that fear does not always produce the same response. It can lead to different behavioural responses, for instance being paralysed by the threat (freeze), approaching the feared item aggressively (fight), or an attempt to escape the threat (flight). The reality of the diverse potential responses to fear means that it can be either friend or foe (Cacciotti and Hayton, 2015). According to Ng (2016), fear of failure in entrepreneurship is linked to the fear of the consequences of failure. If one's emotional state improves, it can be expected that one's self-efficacy should also improve (Bandura and Adams, 1977). On the other hand, positive emotions lead to an increase in behavioural responses that are supportive of higher self-efficacy (Schutte et al., 2008). In a paradoxical way, fear of failure can lead to greater effort, which increases the likelihood of success for entrepreneurial activities (Cacciotti and Hayton, 2015).

In summary, ESE can be increased through the utilisation of two approaches, the first being a micro approach related to attempting to alter students' beliefs and also providing more technical skills (Chen et al., 1998). The second approach involves attempting to change the environment for potential and actual entrepreneurs. This is based on the belief that ESE is likely to develop in a more supportive environment characterised by successful entrepreneurs (Chen et al., 1998).

Chun-Mei and Hsi-Chi (2011) posit that there is a reciprocal relationship between ESE and learning. In their research, Chun-Mei and Hsi-Chi (2011) found that EI and ESE had a significant effect on entrepreneurial learning behaviour. Of the two, EI was shown to have the greater impact (Chun-Mei and Hsi-Chi, 2011). This is most likely due to the fact that students with the highest EI are often already involved in a start-up process, which makes them more appreciative of the value of the lessons being taught, as they are being taught skills they wish to use in the near future and they already have an idea of where and when they will use such skills.

3.15 CONCLUSION

This chapter positions ESE in the entrepreneurship theoretical framework. It opens by discussing EO and IEO, clearly indicating where ESE fits in IEO. The chapter then defines ESE as a multi-dimensional construct made up of opportunity recognition, business relationships, management and risk tolerance. The definition is followed by an exposition of each dimension and also a discussion about how ESE is an antecedent of EI. It is then argued that ESE is what determines whether or not a person dabbles in entrepreneurial activities and exerts significant effort towards achieving entrepreneurial goals (Hechavarria et al., 2012). Understanding the sources of ESE beliefs paved the way for a discussion of the way in which culture and gender exert influence. The six cultural dimensions advanced by Hofstede (1980) were used to shed light on cultural influences on ESE, while the theoretical model for gender stereotyping by Sweida and Reichard (2013) was used to explore the influence of gender on ESE. Seven entrepreneurial performance models were reviewed to ascertain which of them take ESE into account.

Only four of the seven had motivation as a prominent factor that follows self-efficacy (Zimmerman, 2000). The ways to increase ESE paved the way for the next chapter on transformative learning. As ESE is a fairly stable construct that builds over time (Chen et al., 1998), it is fair to assume that it is difficult to transform. In fact, in a nationwide study by Steenekamp (2013) of 1,808 South African Grades 10 and 11 students, he found that there was no practical or discernible impact on entrepreneurial attitudes, intentions, innovative skills and all relevant skills after completing the Mini-Enterprise Programme of Junior Achievement South Africa. Similarly, in an earlier study by Mentoor and Friedrich (2007) of first year students enrolled in an entrepreneurial module at the University of Western Cape, no positive impact of the module on entrepreneurial innovation, locus of control, need for achievement or self-esteem was found. In light of no improvement from entrepreneurial training reported, Chapter 4 explores how real change can be achieved using transformative learning.

CHAPTER 4 :
LEARNING AND TRANSFORMATIVE LEARNING

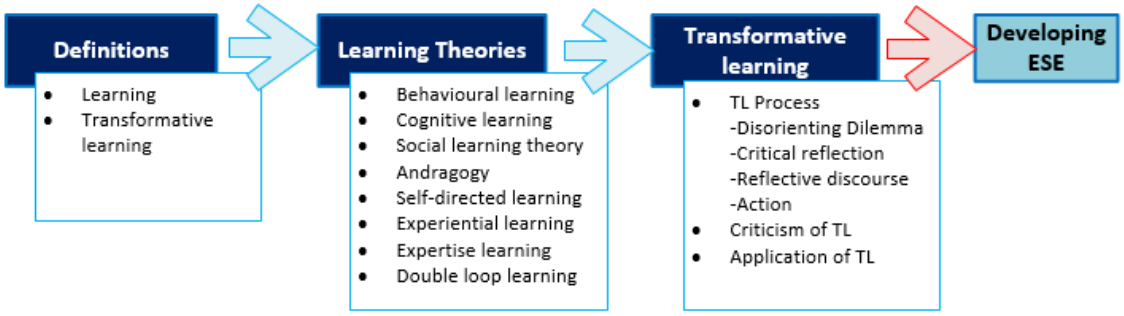
4.1 INTRODUCTION

Learning is the basis of any transformation. This chapter defines learning as a "transformation of experience" (Kolb, 1984). A key focus of this study is transformative learning which is defined as a "process by which we transform problematic frames of reference … to make them more inclusive, discriminating, open, reflective and emotionally able to change" (Crowther and Sutherland, 2008:26; Mezirow, 2009). Nine other theories of learning are discussed in order to indicate how transformative learning is similar and also differs from other learning theories. The chapter discusses the transformative learning process, especially the four key transformative learning processes, namely disorienting dilemma, critical reflection, rational discourse and action. To balance the discussion, key criticisms of transformative learning are also presented, for instance the fact that it stresses cognitive dimensions at the expense of other important dimensions, namely emotional and social (Merriam, 2004; Illeris, 2014). The chapter concludes with an explanation of the way in which the transformative learning process is applied in this research. Specifically, it explains the four types of transformation advanced by Taylor (2008) and then a typology by Hoggan (2016), which can be used to gauge the level of transformation. From this discussion it is apparent that evaluating the transformation of one's worldview, sense of self, epistemology, capacity, behaviour or ontology through the study of an existing programme is difficult. Most programmes are not designed to achieve transformation, notwithstanding their stated objective. A key factor is the need for a training model oriented towards students' need for transformation (Chimucheka, 2014).

4.2 ORGANISING MODEL

Adult learning encompasses a vast area of study characterised by a plethora of theories, of which transformative learning theory is one. To better position the transformative learning theory, definitions of learning and transformative learning are provided, followed by an exposition of learning theories. This culminates in a detailed discussion of the transformative learning theory (refer to Figure 4.1. below). All this is building towards ultimately the development of higher level of ESE, as shown in figure 4.1.

Figure 4.1: Chapter 4 Organising Model



From Figure 4.1 above, definitions of learning and transformative learning pave the way for a discussion of learning theories. An exposition of various learning theory helps to position transformative learning theory in adult learning literature. This leads to an exploration of the way in which transformative learning can be used to increase ESE, a construct that affects IEO, EI and entrepreneurial action.

4.3 DEFINING LEARNING AND TRANSFORMATIVE LEARNING

In order to understand transformative learning in entrepreneurship, there is a need to first explore the definition of adult learning. Adult learning is a relatively new area of study that was pioneered by Malcom Knowles (Lieb and Goodlad, 2005). Learning is a basic human behaviour, which is truly lifelong (Merriam and Bierema, 2013) and emanates from one's need to interact with the environment (MacKeracher, 2004). Kolb (1984) defines learning as a process where knowledge is created through the "transformation of experience". This definition is underpinned by an understanding that learning is a two process approach, combining cognition and experience (Jarvis, 2011). Gagné (1985) defines learning as a change in a person's condition or capacity that persists over time and that cannot be ascribed to the process of growth. In this definition, learning is seen as both a process and an outcome (Merriam and Bierema, 2013). Learning proceeds from the desire of a person to reduce the unknown and uncertainty to a manageable level in order to enhance survival and security (MacKeracher, 2004). Now that a brief groundwork of learning has been, it is important to understand what makes learning "transformative", as transformative learning is a core concept of this research.

Transformative learning is "a deep, structural shift in basic premises of thought, feelings, and actions … that dramatically and irreversibly alters our way of being in the world" (Transformative Learning Centre, 2016). It is a "process by which we transform problematic frames of reference (mind-sets, habits of mind, meaning perspectives) … to make them more inclusive, discriminating, open, reflective and emotionally able to change" (Crowther and Sutherland, 2008:26; Mezirow, 2009). While the former definition is direction neutral, i.e. is not specific as to whether or not the change is positive or negative, the latter definition is clearly positive (Crowther and Sutherland, 2008:26; Mezirow, 2009). O'Sullivan et al. (2002) state that "Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and the natural world; our understanding of power in interlocking structures of class, race and gender…" (O'Sullivan et al., 2002:11).

Transformation can be described as a change in epistemology, one's way of knowing (Kegan, 2000). The real meaning of transformative learning is when a way of knowing moves from "subject" to "object"; from a place of where we are "had by it" to a place where we "have it" (Kegan, 2000). An issue is an "object" if people can look at it, reflect on it, control and incorporate it in their thinking (Kegan, 2000). On the other hand, an issue is "subject" when a person is run by, identified with, fused with and at the effect of it (Kegan, 2000). Transformation occurs when one takes responsibility for what is "subject" and converts it into what is "object" (Kegan, 2000). Transformation can also be a shift in developmental maturity, that is, a gradual shift in identity in ongoing personal development (Fitch & O'Fallon, 2013).

This study uses Mezirow's (2009) definition of transformative learning as a process by which a person transforms problematic mind-sets, habits of mind or meaning perspectives to be more open, inclusive, reflective and emotionally able to change. This definition was selected because it closes represent this study is evaluating.

Before further exposition of transformative learning, it is essential to consider the various adult learning theories in the existing literature. Adult learning is underpinned by numerous learning theories that offer various orientations of learning. It is critical to first grasp other learning theories before selecting the preferred transformative learning theory (Mezirow, 1991; Mezirow, 1994; Mezirow and Marsick, 1978). These learning theories are discussed in the next section.

4.4 LEARNING THEORIES

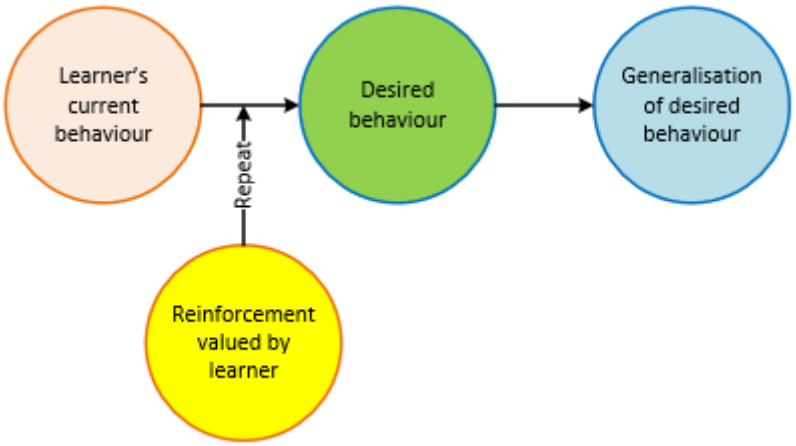
A learning theory attempts to explain the way in which learning actually occurs, that is, an explanation of what really takes place during learning (Merriam and Bierema, 2013). Unfortunately there is no consensus among researchers as to what constitutes key learning theories, as different people identify different theories as learning theories (Merriam and Bierema, 2013). In this research the following nine theories are explored: behaviourism; cognitivism; social learning theory; social constructivism; andragogy; self-directed learning; experimental learning; expertise theory and double-loop learning theory. The focus of the discussion of the different learning theories is to reflect on how these theories can contribute to teaching entrepreneurship among the youth.

4.4.1 Behavioural Learning Theory

Behavioural learning theory is an old learning theory that contains insights it can contribute to entrepreneurial training. It is underpinned by Pavlov's dog experiment in 1890, in which the psychologist rang a bell whenever he fed a dog (Merriam and Bierema, 2013). Eventually the dog would begin to salivate whenever it heard the sound of the bell, even if there was no food. Pavlov identified four stages of classical conditioning, namely acquisition (initial learning of conditioned response), extinction (where the conditioned responds ends because the reward is not provided), generalisation

(when a learned response is spread across similar situations) and discrimination (the ability to distinguish situations contrary to conditioning, as opposed to generalisation) (Pritchard, 2013). This was developed into a full-fledged theory by Skinner and others (Merriam and Bierema, 2013). A behaviourist's definition of learning is, a permanent change in behaviour as a result of a person's experiences (Jarvis et al., 2003). Key proponents of behaviourism are Ian Pavlov, Edward Thorndike, John B Watson, BF Skinner and Clark Hull (Jarvis et al., 2003). This concept's underpinning of behavioural learning theory is illustrated in Figure 4.2 below.

Figure 4.2: Behavioural Learning Theory and Classical Condition



Source: Researcher's own illustration

In the figure above, to move to the desired behaviour, the teacher needs to provide rewards that are valued sufficiently by the learner. Once the desired behaviour has been mastered, it can be spread to similar situations (generalisation).

The behavioural learning theory is underpinned by a number of assumptions, which are discussed in the following section.

4.4.1.1 Assumptions of the Behavioural Learning Theory

Key assumptions of behavioural learning theory are summarised by Munoz (2017) as follows:

- the principles of learning apply equally to the various animal species;
- learning can be studied effectively by focusing on understanding stimuli and responses;
- learning is mostly about behavioural change and most internal processes are excluded;
- learning is generally about environmental events (conditioning) and occurs most often beyond the organism's control and
- people or organisms are generally blank slates waiting to be conditioned.

The above assumptions are significantly different from transformative learning theory, as it is more cognitively oriented. In behaviourism, thinking and one's background are not particularly important, as the learner is deemed to be a blank slate. To explore this further, it would be important to ascertain the way in which behaviourism can be applied in learning situations.

4.4.1.2 Behavioural Learning Theory in general learning situations

According to the behavioural learning theory, learning is equal to a change in observable performance (Ertmer and Newby, 1993). Human learning occurs as a result of the way in which certain stimuli are organised in the environment, that is, when the stimulus is associated with the appropriate response (Merriam and Bierema, 2013; Ertmer and Newby, 1993). Key to behaviourism is the way in which this association is made, reinforced and maintained (Ertmer and Newby, 1993). Fundamental in behaviourism are the consequences of performance, that is, if performance is followed by reinforcement and if it is likely to be repeated in future (Ertmer and Newby, 1993). The learner is presented as being reactive to the conditions of the environment and not really taking an active role in volitionally discovering the environment (Ertmer and Newby, 1993).

In a learning situation learners can be given rewards, for example books, stamps or stars, which can be incremental in nature, to elicit the required behaviour (Pritchard, 2013). In providing guidance with regard to rewards, Pritchard (2013) suggests that rewards must be valued by the recipient, everyone needs to receive something for their best effort and if rewards are given unexpectedly, motivation will be maintained at a high level.

4.4.1.3 When is the Behavioural Learning Theory most appropriate?

Despite ongoing rejection of behaviourism since the 1980s, it has been pivotal in the development of educational technologies (Deubel, 2003). Behaviourism has been instrumental in innovation in mastery learning, competency testing and educational accountability. Based on behaviourism, people responsible for course design will assume that activities that led to a particular behaviour in the past can be replicated with the same outcome (Deubel, 2003). Behaviourism is ideal in learning that involves recalling facts, defining and illustrating concepts and performing a specified procedure automatically (Ertmer and Newby, 2013).

It is also a behaviourist assumption that students learn by doing, experiencing and trial and error as opposed to being passive recipients of information (Deubel, 2003). In line with behaviourism, learners must be assessed for their competencies and needs, so that the learning programme would be designed appropriately (Deubel, 2003). Learner performance is measured against objective criteria to assess one's level of mastery (Deubel, 2003).

In light of the need to measure, Atkins (1993) recommends that the following criteria be kept in mind.

- Subject matter should be in small, logically discrete steps and positive examples should be provided to re-inforce understanding.

- Activities should be sequenced from easy to difficult, but the learner should not have control over the pacing and sequencing of materials. Learners may be re-routed to repeat or skip certain sections based on their performance.

- The required skill or procedure should be explained before learners are expected to repeat the desired behaviour. Performance standards should be made explicit and the design should emphasises the need for minimal errors.

The guidelines from the behavioural learning theory could be useful in designing entrepreneurial courses, especially teaching specific skills such as marketing. Learners can practice by mirroring the required behaviours of experienced people until they have mastered the relevant skill (Astrid and Jose, 2016). Mirroring involves being shown how to do and knowing oneself from interactions with another person (xxx).

4.4.1.4 How should instruction be designed in behaviourism?

Under behaviourism, the trainer/instructor should focus on clarifying the appropriate response and under what conditions this response is appropriate (Ertmer and Newby, 1993). The learner should be given sufficient opportunities to practise in order to facilitate the correct link between stimulus and response. The key responsibilities of the trainer are to determine the cues needed to elicit the desired response, arrange for practice situations and organise the relevant environmental conditions to make it easy for learners to produce the desired response (Gropper, 1987).

In entrepreneurship training this can be through exposure to computer simulations of the desired behaviours with feedback provided. Business plan competitions where students win awards could also be appropriate, bearing in mind the advice advanced by Pritchard (2013) that everyone in the competition should win something.

4.4.1.5 Strength of behaviourism

The behavioural learning theory's main tenet is that it can provide specific and quick solutions to well defined problems (McLeod, 2003). It also provides a way to learn specific skills that rely on repetition and feedback. Entrepreneurship skills such as marketing, writing, public speaking and finance can be taught using the behavioural learning theory guidelines of repetition and reward.

4.4.1.6 Criticism of behaviourism

The main criticisms of behaviourism presented by Pritchard (2013), are that:

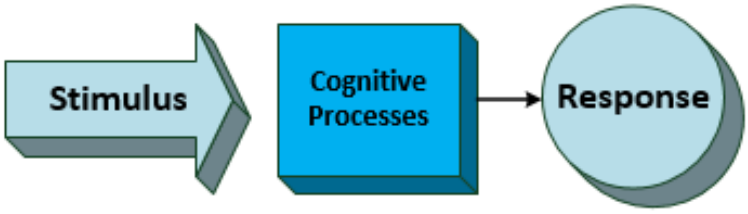
- rewards can demean the learning experience and people could lose interest in learning for its own sake;
- sometimes rewards introduce an element of unfairness in the awarding of rewards;
- behaviourism sometimes leads to learning without understanding, as people learn to mimic the correct behaviour without understanding the reasons for that behaviour;
- rewards can detract from the core elements that need to be learnt and
- sometimes people who feel they have a low chance of success are demoralised by rewards.

Due to the fact that behaviourism cannot adequately explain the acquisition of higher skills (Ertmer and Newby, 2013), numerous modern learning theories discount behaviourism, but it does have a place in learning (Pritchard, 2013). The next learning theory to be discussed, which is significantly different from behaviourism, is cognitive learning theory.

4.4.2 Cognitive Learning Theory

Cognitive learning theory differs from behavioural learning in that the emphasis is on the cognitive processes involved in learning. Cognitivism arose due to the failure of behaviourism to explain most social behaviours (Harasim, 2017). Behaviourism failed to explain the way in which people make sense of information (Yilmaz, 2011). Behaviourism places significant emphasis on what can be seen and measured, against the backdrop of psychologists realising the power of the mind to influence decisions that are not linked to any external stimuli (Harasim, 2017). Central to cognitive learning theory is that behaviour is not directly linked to a stimulus, as there are mental processes and other factors that reduce, or minimise, the predictability of responses to stimuli (Harasim, 2017; Yilmaz, 2011). In light of this, cognitive learning is a permanent change in mental association as a result of experience and internal mental processes that cannot be observed (Pritchard, 2013). The shift from behaviourism to cognitivism was mainly due to the work of people such as Edward Chase Tolman, Jean Piaget, Lev Vygotsky and Jerome Bruner (Yilmaz, 2011). Unlike behaviourism, cognitivism emphasises thinking processes and in observing behaviour an attempt is made to infer the thinking that produced such behaviour (Yilmaz, 2011). This is illustrated in Figure 4.3.

Figure 4.3: Cognitive Learning Theory



Source: Researcher's own illustration

According to the figure above, the response is a sign of thinking, which is not observable. The cognitive learning theory is therefore underpinned by a number of assumptions that are discussed in the following section.

4.4.2.1 Assumptions of Cognitive Learning Theory

The cognitive learning theory encompasses a number of assumptions that are listed below.

- Cognitive learning theorists view learning as an active goal-oriented process of acquiring and reorganising information in the relevant cognitive structure (Yilmaz, 2011; Shuell, 1986).
- The learner is not a passive recipient of information, but an active participant (Good and Brophy, 1990; Shuell, 1986).
- Cognitivists also assume human behaviour to be predictable, which means that if something worked before, it should continue to work (Harasim, 2017).
- Learning is cumulative in nature, which implies that the acquisition of new knowledge is dependent on the amount of prior knowledge that the student has accumulated (Shuell, 1986).
- Learning occurs based on how meaningful the new information is to the student; what meaning does the individual extract from the information being presented (Shuell, 1986).
- Cognitive learning is concerned with analysing performance and cognitive abilities, for example through tests of mental ability, inductive and deductive reasoning (Shuell, 1986).

From the above, it is apparent that the cognitive learning theory assumptions are significantly different from behavioural learning theory, due to their emphasis on thinking processes. However, the over-emphasis on cognitive processes is, to an extent, similar to transformative learning. There is a clear distinction in that in transformative learning a person challenges what they already know (Mezirow, 1990), whereas in cognitivism a person builds on what they already know to expand their knowledge (Shuell, 1986).

Pursuant to the above assumptions, cognitivism uses several learning techniques that are discussed below.

4.4.2.2 Cognitive Learning Techniques

Cognitive and educational psychologists have developed several learning techniques that could help students achieve their learning goals. These techniques were advanced by Dunlosky et al. (2013).

- Provide an elaborate interrogation such as an explanation of why the stated facts are true;

- Demonstrate the way in which new information is related to existing information or provide steps for solving a problem;
- Write summaries of what is going to be leant;
- Highlight key portions of what needs to be learned whilst reading;
- Use learning devices such as mnemonics to remember the learnt material;
- Attempt to form a mental image associated with the material being learnt;
- Read the material more than once to aid recall of the material;
- Practice tests through self-testing and taking practice tests and
- Distribute and interweave practice over time by scheduling relevant and varied kinds of materials over the learning period.

These techniques can be useful when teaching skills to entrepreneurs, especially if these skills are consistent with what people already know. In the following section the design of lessons based on cognitivism is discussed.

4.4.2.3 How should instruction be designed in line with cognitive learning theory?

Cognitive learning theory is premised on the belief that people learn by receiving, storing and retrieving information (McLeod, 2003). In light of that, instructional designers should design tasks that make it possible to effectively and efficiently process received information (McLeod, 2003). Consistent with cognitivism, the following procedure must be followed (Gagné, 1985):

- the instructor must first gain the students' attention;
- the learners must be informed of the objectives; what they should be able to accomplish after learning;
- the instructor should attempt to situate whatever is being taught into what is likely already known by the students;
- the instructor should provide models and examples to facilitate pattern recognition;
- the instructor must provide learning guidance; assist learners to encode new information for storage in the long term memory;
- students must demonstrate their learning;

- feedback must be provided to students to improve their current skills;
- formal assessment of performance must be undertaken, such as tests, portfolio of evidence, projects and
- there should be a conscious effort to assist students to retain and transfer what they have learnt, usually through repetition.

4.4.2.4 Strengths of cognitive learning theory

The cognitive approach to learning is likely to produce learning that is meaningful to the learner, which means they can retain it for a longer period of time (McLeod, 2003). The cognitive learning theory is well researched and underpinned by several experimental studies that prove its efficacy, for example research by Loftus and Palmer (1996).

4.4.2.5 Criticism of cognitive learning theory

According to McLeod (2003), the main weakness of cognitive learning theory lies in its strength. The learner is at a significant disadvantage if the pre-required knowledge or information is not possessed by the learner. Many times people with different levels of knowledge and know-how enrol for the same course, making it difficult to captivate everyone at the same time without losing those people with a relatively lower level of knowledge or skill. Another weakness highlighted by McLeod (2003) is that cognitive learning theory presumes that there is a finite and pre-determined number of learning goals. This approach is sufficient for indicating that the predetermined goals have been achieved but does not provide any incentive to achieve additional goals.

The cognitive learning theory is useful in teaching adults entrepreneurial skills. However, it will not be as effective if what is needed is a transformation of the habits of mind, as some time is required in entrepreneurship.

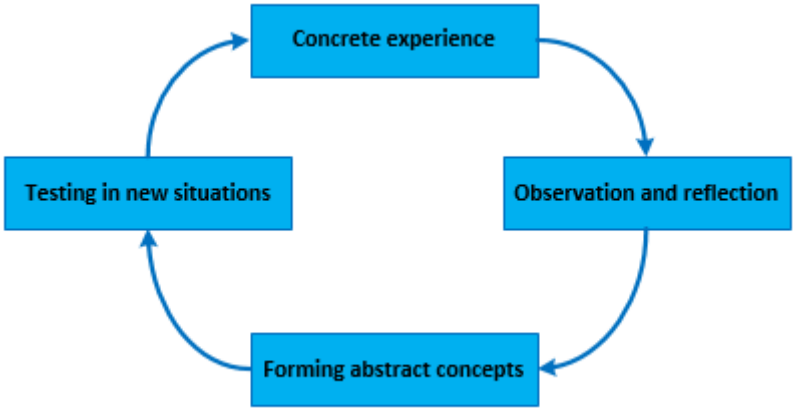
4.4.3 Constructivist Learning Theory

The constructivist learning theory posits that although there is an objective world out there, people derive their own meaning with regard to that external world (Duffy and Jonassen, 2013). As the meaning of the external world is individualistic, numerous meanings can be derived from events, of which more than one can be correct (Duffy and Jonassen, 2013).

The fundamental assumption of constructivism is that people create knowledge through experience (McLeod, 2003). There is ultimately no shared reality but rather reality from constructive processes (Suchman, 1987). The experience a person goes through when imbedding an idea is fundamental to their understanding of it (Duffy and Jonassen, 2013). Pursuant to this, constructivists emphasise the need to

situate cognitive experiences in authentic environments (Duffy and Jonassen, 2013). The constructivist learning theory is illustrated in Figure 4.4.

Figure 4.4: Constructivist Learning Model



Source: Researcher's own illustration

From the above diagram it is apparent that people make meaning of their experience through reflection. From such reflection they construct a number of concepts, which they test in new situations.

The following section provides the assumptions used in constructivist learning theory.

4.4.3.1 Assumptions of constructivist learning theory

The following are the assumptions that guide the constructivist learning theory.

- The instructor has to focus on the way the learner thinks, as opposed to the subject matter or lesson to be taught (Hein, 1991);
- Meaning construction and learning occur in the mind and sometimes physical actions and hands-on experience may be necessary to improve learning (Hein, 1991);
- There is no other knowledge besides that which is created (constructed) by the learner (Hein, 1991). This means that there is no knowledge out there independent of the knower (Hein, 1991);
- Learning is an adaptive activity that is situated in the context in which it occurs (McLeod, 2003);
- Experience and prior knowledge play an important role in learning (McLeod, 2003);
- People generally resist change (McLeod, 2003); and
- Social interaction with the instructor and other learners has a role in learning (McLeod, 2003).

Based on the above assumptions, the similarities between constructivist learning theories are that they are both cognition-oriented and emphasise meaning-making. However, the fundamental difference is

that the constructivist learning theory focuses on enhancing prior knowledge (McLeod, 2003), while transformative learning emphasises the need to break away from the past.

4.4.3.2 How should instruction be designed in line with constructivist learning theory?

When designing a learning program based on constructivist learning theory, the instructor should take into account the learners' existing knowledge (McLeod, 2003). According to Dimock and Boethel (1999), any instructional design must begin with the designer having an in-depth understanding of the learners and begin from where they are to build knowledge. In light of the expected varied outcomes per learner, there is an open-ended expectation with regard to the results of the programme (McLeod, 2003). However, instead of focusing on the outcomes of the training programme, changing the learners' perceptions of the achievement of the goals from the training is critical (Morrison et al., 2010).

4.4.3.3 Constructivist learning techniques?

Jonassen (2006) claims that it would be an oxymoron to have learning techniques for constructivist learning. This is because constructivism is based on assumptions of no identical objective reality, except the reality constructed in the mind of the learner. However, in the same argument, he offers some useful techniques that can be used to enhance learning. Techniques to support meaningful learning include anchored instruction, problem-based learning, micro worlds, cognitive tools and simulations (Jonassen, 2006). Other constructivist learning techniques have been borrowed from the interpersonal training environment, such as modelling, guided discovery and scaffolding (Reigeluth, 1983).

The learning techniques in this section can be useful when training entrepreneurs. Instead of predominantly using a lecture method, skills can be learnt better using the techniques discussed in this section.

4.4.3.4 Strength of constructivism

The main strength of constructivism is that content can be presented from multiple perspectives (McLeod, 2003). Content can be presented as case studies, learners can develop their own representations and active knowledge construction is promoted over the passive reception of information (McLeod, 2003).

4.4.3.5 Weaknesses of constructivism

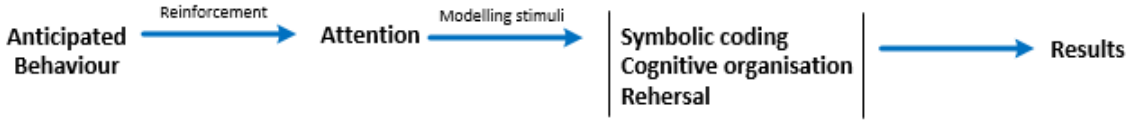
One of the weaknesses of constructivism is that, due to the promotion of individual interpretation, there is a need for a significant investment in learning resources, which are not always available (Dimock and Boethel, 1999). In addition, learners could experience the same lesson differently, making it difficult to evaluate their learning (McLeod, 2003). For example, in many cases there is need to learn factual information like bookkeeping for a business. A student has to understand bookkeeping principles which are not open to much interpretation.

From the constructivist learning theory it is apparent that useful techniques can also be applied for training entrepreneurs. Constructivist learning theory also provides a good background for students to understand meaning-making, which is important in adult learning. However, no matter how private people are, understanding, their social environment significantly affects the way in which they create meaning. This is discussed in the next section.

4.4.4 Social Learning Theory

Social learning theory is a general behavioural learning theory proposed by several psychologists, namely Bandura (1969, 1977 and 1985) and Dollard & Miller (1950) and sociologists such as Akers, Krohn, Lanza-Kaduce and Radosevich (1979). This theory synthesises principles of learning with cognitive psychology (Leonard and Blane, 1999). Over the years social learning theory has been used extensively to describe the learning that occurs through interaction with others, in which people learn to define their attitudes and behaviours (Miller and Morris, 2016). The theory is versatile and has been used to explain numerous aspects of life, such as crime and deviance (Akers, 2011), family violence and trauma (Abbassi and Aslinia, 2010), health education (Parcel and Baranowski, 1981) and many other human behaviours. Social learning theory is summarised in Figure 4.5 below that was put forward by Bandura (1971).

Figure 4.5: Social Learning Theory



Source: Adapted from Bandura (1971:9)

In Figure 4.5 above people observe anticipated behaviour being performed by others. They model and encode this behaviour and behave in a similar way. The social learning theory is underpinned by the following assumptions.

4.4.4.1 Assumptions of social learning theory

Bandura (1969) propounded four key assumptions of social learning theory, namely differential reinforcement, vicarious learning, cognitive processes and reciprocal determinism. These assumptions are described briefly below.

- *Differential reinforcement* refers to the anticipated and actual consequences associated with engaging in certain behaviour (Miller and Morris, 2016). The thing that reinforce could be either positive or negative and increase the chance of a behaviour occurring in the future (Akers, 2011). Positive reinforcement can take the form of approval from friends and family, while negative reinforcement generally leads to the avoidance of unpleasant experiences (Miller and Morris, 2016).

- *Vicarious learning* is learning that occurs through the observation of other people's behaviour and its consequences (Hoover and Giambatista, 2014). Numerous behavioural responses are learnt through modelling others (Bandura, 1969). According to Hoover and Giambatista (2014), vicarious experiential learning is an inescapable reality of the human condition.

- *Cognitive processes* refers to the covert processing of information, that is, the storage and retrieval of information during learning (Rosenthal and Zimmerman, 2014). The assumption is that cognitive processes such as encoding, organising and retrieving information influence one's behaviour (Leonard and Blane, 1999).

- *Reciprocal determinism* refers to the assertion that behaviour is controlled by the environment and, at the same time, behaviour controls the environment (Leonard and Blane, 1999). Reciprocal means the action is mutual and can go in both directions (Leonard and Blane, 1999).

From the assumptions described above, it is clear that social learning is significantly different from transformative learning. The social learning theory focuses on learning from other people, while transformative learning focuses on self-reflection of one's own past assumptions and beliefs.

4.4.4.2 How should instruction be designed in line with social learning theory?

In a training situation, the instructor should design the training with opportunities for the students to observe the desired behaviours (Drolet, 2012). Social learning theory is ideal for lifelong learners, as they can observe the behaviour of their role models and attempt to replicate it to solve their real life situations (Drolet, 2012). In organisations the social learning theory can be used to teach on-the-job skills, as new members can implicitly be taught the skills and behaviours necessary for career advancement (Gibson, 2004).

When designing entrepreneurship training programmes cognisant of social learning theory, the trainer/ teacher should make use of role models. These role models should be entrepreneurs at various stages of their entrepreneurial journeys for students to emulate. The social learning theory could be seen as an affirmation that people with entrepreneurial backgrounds become entrepreneurs.

4.4.4.3 Social learning techniques

There are a number of techniques based on social learning theory that can be used to enhance learning. For instance, the trainer/teacher must first analyse the behaviours that need to be modelled to highlight key factors, such as the nature of the behaviour and steps that need to be taken (Gredler, 2009). Instructional sequences can be developed to demonstrate what needs to be done and what to watch out for that could lead to failure (Gredler, 2009). The trainer should also provide students with an opportunity to summarise modelled behaviours (Gredler, 2009).

Pursuant to the above techniques, when using a role model in entrepreneurship training, the teacher should assist students to identify what they need to look out for. The important behaviours to model must be apparent.

4.4.4.4 Strengths of social learning theory

The main strength of social learning theory is that it attempts to highlight the influence of the social environment in which the students live and its influence on their learning (Grusec, 1992).

4.4.4.5 Weaknesses of social learning theory

A number of scholars dismiss social learning theory as being too narrow to include all forms of learning (Pahl-Wostl, 2006). This theory was developed from experiments with children with specific focus on the way in which they adopt aggressive and non-aggressive behavioural traits from observing adult models. It has not been effectively tested in a classroom set-up.

Now that the social learning theory has been explored, it is imperative to explore a popular adult learning theory developed by Malcom Knowles, andragogy (Smith, 2002).

4.4.5 Andragogy (Malcom Knowles)

Andragogy is based on the belief that adults fundamentally learn differently from children and this warrants a different field of study (Smith, 2002). It is useful to explore andragogy, especially in entrepreneurship learning, as entrepreneurship is largely learning by adults. The leading figure in andragogy is Malcom Knowles and the term andragogy was a new label to distinguish adult education from pre-adult education (Merriam, 2001). Andragogy came out of period where several studies were indicating that adults were under-performing younger people in various tests (Merriam, 2001). This led to the thought that adult learners were different from pre-adult learners and needed their own specific focus in education, which would take into account the nuances of being an adult (Merriam, 2001).

4.4.5.1 Assumptions of andragogy

Andragogy is premised on four key assumptions that adults are different from children learners, on which traditional pedagogy is based (Smith, 2002). These principles are self-concept, experience, readiness to learn and orientation to learn. A fifth assumption, motivation to learn, was added at a later stage. These assumptions are discussed briefly below.

- Self-concept - as one matures, one's self-concept changes from being dependent to being self-directed (Smith, 2002). This self-concept can direct the adult's own learning (Merriam, 2001);

- Experience - as one matures, one accumulates a vast amount of experience, which can be used as a resource for learning (Merriam, 2001);

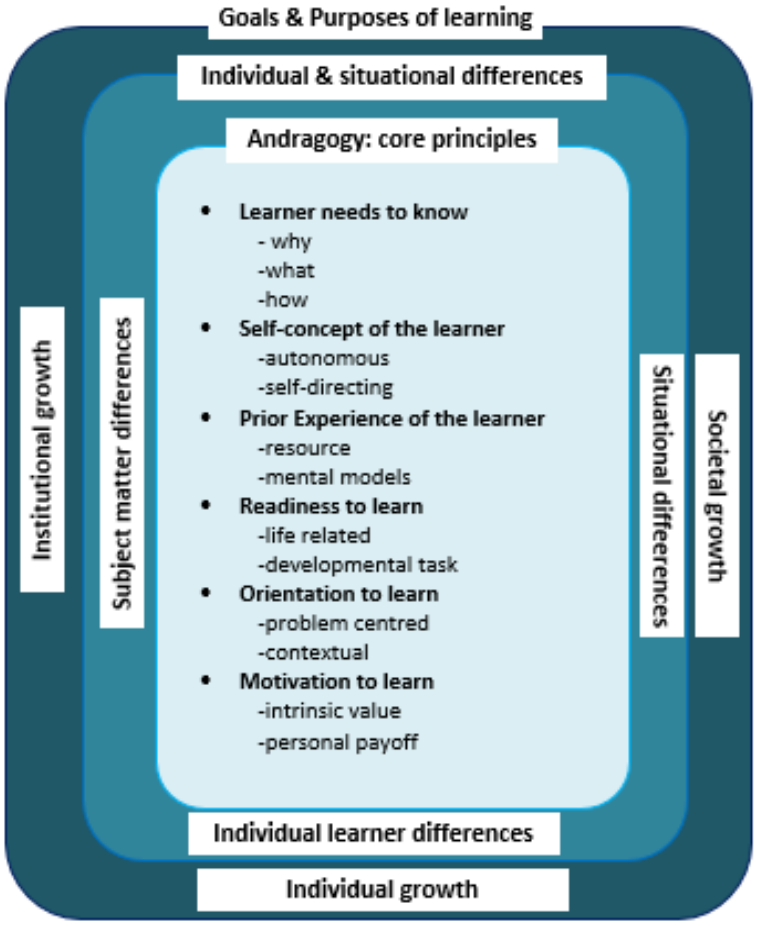
- Readiness to learn - as one matures, one develops more social roles and one's learning is more oriented towards fulfilling those roles (Smith, 2002; Merriam, 2001);

- Orientation to learn - as one matures, one's orientation toward learning becomes more problem resolution, which also means one no longer postpones the application of what is learnt, as young people do (Smith, 2002); and

- Internal motivation to learn - the learning of an adult is motivated internally and not driven from outside (Knowles, 1984; Merriam, 2001)

These assumptions are summarised in Figure 4.6 below as advanced by Knowles et al. (2014).

Figure 4.6: Andragogy in Practice



Source: Knowles et al. (2014)

The above figure illustrates how to apply andragogy systematically across different spheres of adult learning. The three dimensions of andragogy illustrated above are; goals and purpose of learning, individual learner and situational differences and the core adult learning principle. The core purpose of the above figure is to illustrate that learning is a complex activity influences by a myriad of mostly learner specific realities.

4.4.5.2 How should instruction be designed in line with andragogy theory?

Based on the assumptions presented above, Knowles proposed that the adult classroom should be one of "adultness" physically and psychologically (Merriam, 2001). Adult learners need to feel accepted, respected and supported (Knowles, 1984). There is also a need for the teacher to show students that they are joint inquirers rather than the teacher assuming an all-knowing role (Knowles, 1984).

4.4.5.3 Andragogy techniques

Knowles put the idea of self-direction in packaged form and popularised activities that could be adopted by educators (Smith, 2002). These techniques included:

- diagnosis of the learner's needs;
- identifying human material resources for learning;
- choosing and implementing appropriate learning strategies and
- evaluating learning outcomes.

These techniques are useful in entrepreneurship training or teaching. In order to be effective, there is a need to identify what learners need from the training that is being conducted. If the need is for specific skills, then the appropriate resources could be assembled and used.

4.4.5.4 Strengths of andragogy theory

Andragogy has been adopted by numerous adult educators as it provides a clear guide to the practice of educating adults (Merriam, 2001). Andragogy highlights the need to treat learners with respect and cognisance of their age (Knowles, 1984).

4.4.5.5 Weaknesses of andragogy theory

One of the cited weaknesses of andragogy is that it focuses exclusively on the individual and does not take the critical social agenda into account (Grace, 1996). The critical social agenda focuses on power relationships and oppression in society.

There was significant debate in the 1970s and 1980s as to whether andragogy was a real theory or simply best classroom practice (Merriam, 2001). Another criticism that persists is to what extent the assumptions apply solely to adult learners (Merriam, 2001). For instance, some adults are dependent on the teacher to structure their learning, while some children are relatively independent of the teacher for learning (Merriam, 2001). Houle (1996) highlights that education is fundamentally the same at whatever life stage. It deals with the reality of the learner, the goals being sought, the environment in which the learning is occurring and the teaching or learning techniques selected (Houle, 1996).

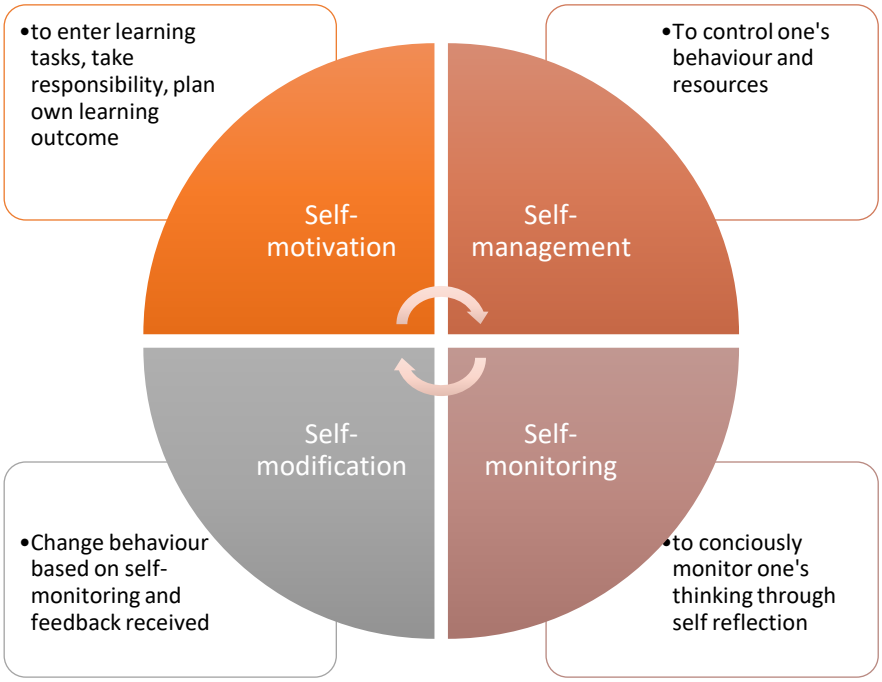
From an entrepreneurship education perspective, andragogy provides good classroom practices, especially when dealing with adult learners (Merriam, 2001). The idea of learner independence under andragogy is further developed in the self-directed learning theory discussed below.

4.4.6 Self-Directed Learning Theory

Self-directed learning seems to be the ideal learning for entrepreneurs, as they struggle with a myriad of problems that make creating and running a business challenging. Self-directed learning entails a process of moving the responsibility of planning the learning from the educator to the student (Conradie, 2014). In its broadest sense, self-directed learning entails individuals taking the initiative, on their own, to diagnose their own learning needs, formulate goals, identify resources and implement the relevant learning strategies (Knowles, 1975; Conradie, 2014). Self-directed learning focuses on the dialogue between the learner and the educator, with the learner actively participating in knowledge construction (Fischer and Sugimoto, 2006). Self-directed learning differs from self-regulated learning (Conradie, 2014). Self-directed learning is in the adult education domain, while self-regulated learning is located in the educational psychology domain (Fischer and Sugimoto, 2006). Stockdale and Brockett (2011) report that for self-directed learning to work, there needs to be motivation, initiative and self-efficacy.

It is important to point out that self-directed learning encompasses various goals that depend on the researcher's philosophical orientation (Merriam, 2001). Researchers grounded in humanistic philosophy posit that the goal for self-directed learning should be self-direction. According to Mezirow (1985), the central goal of self-directed learning should be transformative learning. Another goal of self-directed learning is emancipatory learning and social action (Merriam, 2001). The four dimensions of self-directed learning advanced by the Centre of Teaching Excellence (2017) are shown in Figure 4.7 below.

Figure 4.7: Becoming a self-directed learner



Sources: Centre of Teaching Excellence (2017)

From Figure 4.7 it is clear that the dimension of self-motivation is the basis for learners' taking responsibility for their lesson, while self-management is about controlling one's behaviour and resources. In the bottom part of the circle, self-monitoring, which is a conscious way to monitor one's own thoughts and self-modification, which is concerned with changing one's own behaviour based on self-monitoring.

4.4.6.1 Assumptions of self-directed learning theory

The four key assumptions of self-directed learning provided by Schmidt (2000) are: first, the teacher-leaner environment should be conducive for students to pursue their personal learning needs; secondly, by so doing the self-directed learning skills are developed; the third assumption is that skills acquired during self-directed learning practice can be transferred to professional practice and the fourth assumption is that society needs self-directed learning skills because knowledge becomes outdated very quickly and people should therefore continue educating themselves.

4.4.6.2 How should instructions be designed in line with self-directed learning theory?

There are several guidelines for instructional design. In the early 1980s there were linear recommendations for instructional design that moved from diagnosing needs to identifying resources and instructional formats (Knowles, 1975). In the late 1980s and early 1990s the linear models were enhanced to include the context of learning, more interactivity and the nature of learning (Merriam, 2001). A model advanced by Danis (1992) included learning strategies, phases of learning process, the content, the learner and environmental factors. Central to self-directed learning, students should see the need to learn as well as opportunities for immediate application of knowledge (Quinney et al., 2010).

4.4.6.3 Self-directed learning techniques

Several self-directed learning techniques can be observed in entrepreneurship training, one of which could be used to provide learners with choices of the way in which they wish to proactively carry out their learning process (Quinney et al., 2010). Learners find small instructor-led groups to be very effective, as well as self-learning through reading articles and books (Quinney et al., 2010). Students should be allowed to set their own learning pace and make their own decisions with regard to what they wish to accomplish in the allotted time (Quinney et al., 2010). Feedback also needs to be provided to learners who are using self-directed learning. This can be achieved using self-reflection or self-evaluation questionnaires (Quinney et al., 2010).

4.4.6.4 Strengths of self-directed learning theory

Several studies have found a positive correlation between self-directed learning and academic performance in an undergraduate face-to-face setting (Conradie, 2014). The same result was also found by Quinney et al. (2010) when they implemented self-directed learning in an online teaching environment.

According to Knowles (1975), other strengths of self-directed learning are that:

- people who take the initiative in learning learn more things and are better learners than those who wait for someone to teach them;
- self-directed learning is more in line with the natural processes of psychological development and
- with the rapid changes in technology and the increased volume of information, it is no longer realistic to define the purpose of learning as transmitting what is known, however, education should develop the skills of enquiry.

4.4.6.5 Weaknesses of self-directed learning theory

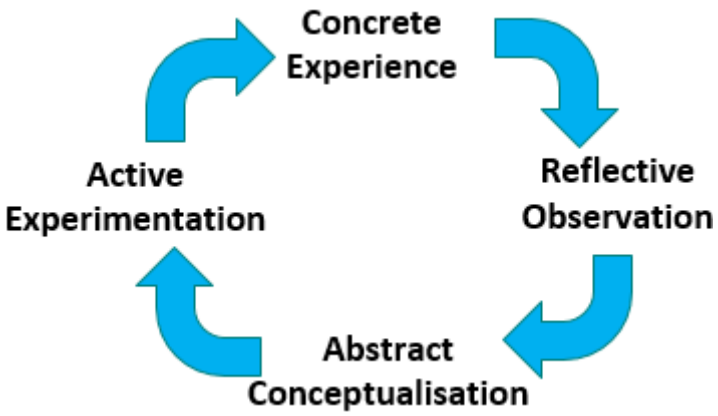
Self-directed learning places a substantial responsibility on learners (Knowles, 1975). Students who enter these self-directed programs without having learnt the skill of inquiry suffer from anxiety and frustration and often fail (Knowles, 1975).

Self-directed skills are critical for entrepreneurs, as they cannot rely on a teacher to show them the things they need to know to become successful entrepreneurs. As entrepreneurs they need to be self-motivated, self-managed, self-monitoring and self-correcting (Centre of Teaching Excellence, 2017). If they are not self-reliant then they are not likely to be successful in the long run. In addition to self-directed learning, entrepreneurs need to learn from experience, which is discussed in the next section.

4.4.7 Experiential Learning Theory (David Kolb)

Experiential learning is the learning people gain from their life experience, as opposed to classroom learning (Kolb, 2014). The founding scholars of experiential learning cited by Kolb (2014) are the likes of William James, Kurt Lewin, John Dewey, Jean Piaget and Carl Jung. Experiential learning attempts to portray the learning that occurs when an individual is in direct touch with the realities being studied, which emphasises direct experience with the primary source (Kolb, 2014). Experiential work includes activities such as fieldwork, internships and apprenticeships (Kolb, 2014). The aim of experiential learning theory is to transform experience into learning and reliable knowledge, as the truth is rarely apparent from events and experience, people need to question their preconception and emotion through critical reflection (Kolb, 2014). The challenge with experience is that it is already dominated by culture and generalisation from past generations, which cannot be easily accessible even to the wisest scholar (John, 1925). Kolb (1984) argues that effective learners should have four types of ability, namely concrete experience ability, reflective observation ability, abstract conceptualisation ability and active experimentation ability. These learning abilities are placed in a cycle as depicted in Figure 4.8:

Figure 4.8: Kolb's Cycle of Experiential learning



Source: Abdulwahed (2009:284)

According to the Kolb Cycle, optimal learning should pass through all four stages in the cycle (Abdulwahed and Nagy, 2009), beginning with concrete experience that leads to reflection on the experience followed by abstract conceptualisation and active experimentation (Kelly, 1997). According to Kolb (1984), abstract conceptualisation is the process of using logic and ideas to understand problems and situations. Active experimentation involves testing and experimenting with new situations (Kolb, 1984).

4.4.7.1 Assumptions of experiential learning theory

Experiential learning theory has a number of fundamental assumptions as listed below (Hay Group Global, 2012).

- The centre of learning is the learner's personal experience.

- The learner is critical as he or she is at the centre of the learning experience.
- The learner is in control of the learning.
- Learning is focused on the outcome of learning and not necessarily on the process.
- Knowledge and ideas are constantly being formed and reformed as they are not fixed, this is accomplished through additional experiences.

From the above summary of assumptions, it is apparent that the learner's experience is being reflected upon in order to build on it. This is different from critical reflection where past experiences are reflected upon in order to identify the meaning schemes that are no longer suitable.

4.4.7.2 How should instructions be designed in line with experiential learning theory?

As a discipline, experiential learning values students' experiences and prioritises active learning components using reflection and peer-to-peer interaction (Furman and Sibthorp, 2013). As a practice, experiential learning discourages rote learning, memorisation and didactic interactions between teacher and learner (Furman and Sibthorp, 2013). Techniques that can be used for experiential learning are described below.

- *Problem-based learning*: the teacher should generate learning problems that students are interested in resolving. This can be achieved by (a) creating a quasi-experiment, or (b) designing a course of action that will lead to problem resolution (Furman and Sibthorp, 2013);
- *Project-based learning*: the teacher explores students' interests and creates a project involving these interests, which leads to the desired learning. For instance, students who are interested in mountaineering could be taught about altitude, safety, decision making, time management etc. as they embark on a mountain climbing trip (Furman and Sibthorp, 2013);
- *Cooperative learning*: The teacher designs an environment in which students learn from one another's past experiences (Hamm and Adams, 1992);
- *Service learning*: this combines community service with educational objectives for the benefit of both the community and the students (Smith, 2008); and
- *Reflective learning*: assists the students to make connections between what they are learning theoretically and the way in which it can be applied in practise (Furman and Sibthorp, 2013).

The above learning techniques can be used in the design of a good entrepreneurship learning programme.

4.4.7.3 Strengths of experiential learning theory

In a study by Ernst (2013), the following strengths of experiential learning were identified:

- a significant increase in cognitive achievements, compared to those participants who did not use experiential learning;
- most of the participants (87%) in the program found the experiential learning enjoyable and 94% felt experiential techniques enhanced the content that was covered and
- most of the participants (94%) thought that using experiential learning made them capable of applying what they learnt to their real world of work.

4.4.7.4 Weaknesses of experiential learning theory

The main criticism of experiential learning is that it is fraught with biases, which are bound to occur in learning from real life experiences (Kolb, 2014). In experiments by Eisenstein and Hutchinson (2006), where they evaluated decisions by managers based on either objective analysis or experience, they concluded that managers and consumers should reduce their reliance on experience and increase objective analyses. In other studies cited by Brehmer (1981), experienced experts often performed insignificantly better than novices at making clinical judgements, for example comparing psychologists to their secretaries in their ability to diagnose mental illness.

March (2010) holds that the challenge with learning from experience is that experience is prone to biases, which are inherent in complex systems. In learning from experience, the human mind unfortunately comes to unjustified conclusions, superstitious associations and other systematic biases (March, 2010). Another criticism of experiential learning is that the vividness of experience often gives the experience an undue weight when making decisions and judgements (Kolb, 2014).

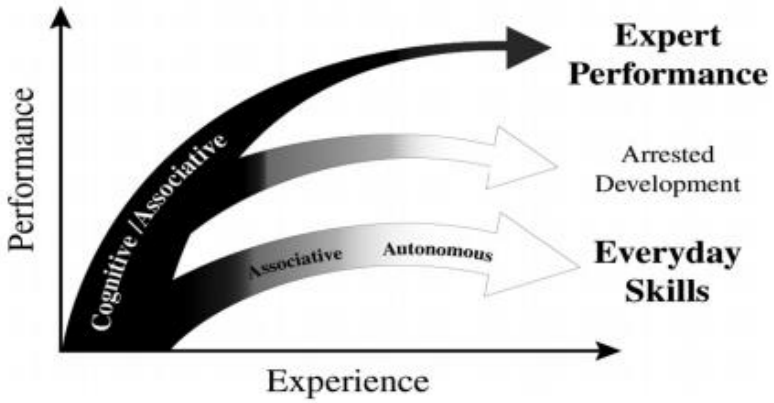
Despite the value of experience, it is unlikely to lead to transformational learning. Learning from experience means there is not enough questioning of what is known, something at the core of transformative learning. This leads to an exploration of the expertise learning theory.

4.4.8 Expertise Learning Theory (Ericson)

The expertise learning theory attempts to understand the mechanisms leading to superior performance in various domains, such as chess, medicine, sports etc. (Ericsson and Smith, 1991). The expertise learning theory seeks to distinguish outstanding individuals in a domain from the less successful individuals (Ericsson and Smith, 1991). For instance in music, Ericsson and Lehmann (1996) postulated that to become an expert there is a need to have spent approximately 10,000 hours by the age 20 years playing the specific instrument. As a general rule, the process takes approximately 10 years of deliberate practice activities (Ericsson and Lehmann, 1996). Deliberate practice is a process of acquiring skill

through serious study and performing activities, usually designed by a teacher aimed at improving skills (Newport, 2016b). According to Boshuizen et al. (2006), the process of acquiring this knowledge is at times discontinuous, meaning it does not follow a straight line. However, there is a clear difference between the level of expert performance and everyday skills (Ericsson, 2006), as illustrated in Figure 4.9 below.

Figure 4.9: The Qualitative differences between expert performance and everyday skills



Source: Ericsson (2006:687)

As illustrated in Figure 4.9 above, after a period of time performing, many people reach a plateau, which is characterised by automatic performance without much effort expended, as shown in the grey part of the lower arrow (Ericsson, 2006). In contrast, expert performers develop complex mental representations to attain higher levels of control over their performance in order to continue improving their performance (Ericsson, 2006).

4.4.8.1 Assumptions of the expertise learning theory

- Mere repetition of task leads to a less than maximum plateau in skills (Ericsson et al., 1993);
- Better training and deliberate effort can lead to a dramatic improvement in performance (Bryan and Harter, 1897)
- To achieve expert status, a person should master the existing knowledge and techniques (Ericsson et al., 1993);
- Many years of preparation precede becoming an expert and in many fields that period of preparation is approximately 10 years (Ericsson et al., 1993);
- For a person to be able to engage in deliberate practice, they need to have access to teachers, training materials and other resources aimed at improving his or her skills (Ericsson et al., 1993);
- Deliberate practice is usually not inherently motivating and enjoyable but an activity that requires effort aimed at improving skills (Ericsson et al., 1993); and

- As deliberate practice requires effort, it can only be sustained over a relatively short period of time (Ericsson et al., 1993).

Entrepreneurship can definitely benefit from bearing the above assumptions in mind, particularly to enhance a specific skill.

4.4.8.2 How should instructions be designed in line with expertise learning theory?

There is a limit to the amount of improvement resulting from practise that can be achieved in a day. An effective period of deliberate practice should be limited to 1 hour a day (Henshaw and Holman, 1930). When a person is deliberately practicing, they should be fully attentive to their practice, as practise without attention can be detrimental to potential improvement (Auer, 1960). There is a need to incorporate periods of rest between practise periods (Ericsson et al., 1993). If an individual does not incorporate rest periods in their deliberate practice efforts, they are likely to run into motivation problems and at times failure, as deliberate practice in not inherently enjoyable (Ericsson et al., 1993).

4.4.8.3 Strengths of the expertise learning theory

Ericsson and colleagues (1993) clearly indicated the importance of extensive practice in order to acquire the desired skills and at the same time provided a reasonably simple but powerful formula for success (North, 2012). They also clarified the type of practice needed to significantly improve skills (North, 2012). The expertise learning theory clearly indicates that expertise is not hereditary but a result of a deliberate effort to improve. This implies that anyone can become an expert, as long as they devote enough time and resources to deliberate practice.

In terms of the transformative learning or entrepreneurs, this theory provides an indication that to become a successful entrepreneur, one needs to continuously improve one's skills. This line of thinking is not apparent in entrepreneurial learning programs, which are the focus of this study. The general thinking in entrepreneurship training is that when a person achieves a certain level of expertise, they are an expert and nothing more needs to be done to become more successful.

4.4.8.4 Weaknesses of the expertise learning theory

The expertise theory provides a clear need for deliberate practice to attain expert status, which unduly underplays the complex interaction of multiple causal factors of human development, for example social, cultural and neurological factors (Tallis, 2016; Rutter, 2006). Baker (2007) expresses a fear that the straight line prediction that deliberate practice will lead to being an expert advanced by Ericsson et al. (1993) could be too simplistic.

The theory uses a significant reductionist approach that can be measured at the expense of other tacit factors that influence performance (North, 2012). Deliberate practice does not necessarily guarantee

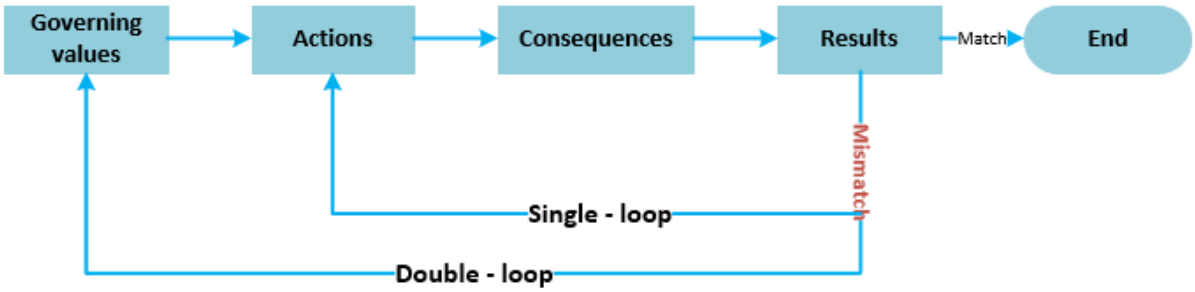
expert status (Baker, 2007). In many domains the experience of competition is pivotal in developing expertise (Baker et al., 2003).

The expertise learning theory provides useful insight into the way in which one can improve one's entrepreneurial skills. However, it still underplays the need to transform one's attitude and thinking processes. The issue of confounding mental models is covered by double-loop learning.

4.4.9 Double-Loop Learning (Argyris and Schon)

There are generally two types of learning that occur, namely single-loop and double-loop learning. Single-loop learning is akin to error correction occurring in the activities that an individual is conducting (Holmgren and Bodin, 2016). Single-loop learning occurs when a person identifies and corrects errors without changing their underlying values and the status quo is maintained (Argyris, 2003). In an example provided by Argyris (1991), single loop learning is like when a thermostat set at a certain temperature begins working as soon as the temperature falls below that temperature. In double-loop learning, when an error is identified it is corrected by first changing the underlying assumptions that caused the error (Argyris, 2003). This is illustrated in Figure 4.10 below.

Figure 4.10: Single-Loop and Double-Loop Learning

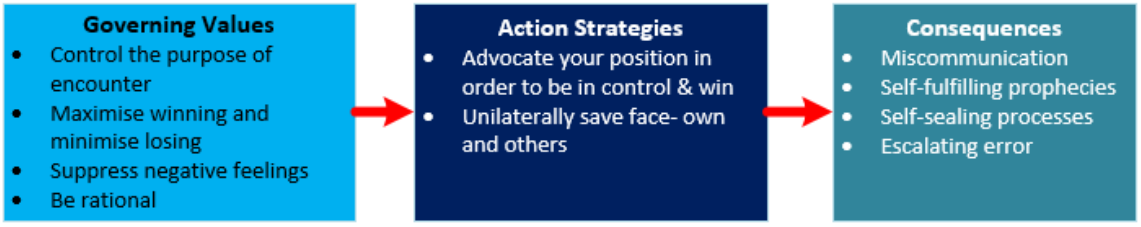


Source: Blackman (2004:20)

As shown above, to correct a mismatched consequence using single-loop learning there is no need to re-visit governing values as one would with double-loop learning (Blackman et al., 2004). What is also clear in the diagram is that learning in life usually occurs when the outcome is mismatched with the expected outcome.

In his early work Argyris hypothesised three types of learning models, namely Model I, Model 0-1 and Model II (Argyris, 1976). People utilise theories to carry out their plans (Argyris, 2002). Despite using a specific theory to solve problems or execute plans, most people are unaware of the particular theory they are utilising (Argyris, 1977; Argyris, 2002). If asked, they will name another theory they think they use, which is a theory they espouse (Argyris, 1977; Argyris, 2002). As they are unaware of utilising a particular theory, people fail to self-correct and they become prisoners of their own theories (Argyris, 1977). This is Model I learning, which is illustrated in Figure 4.11.

Figure 4.11: Model I: Theory-in-use

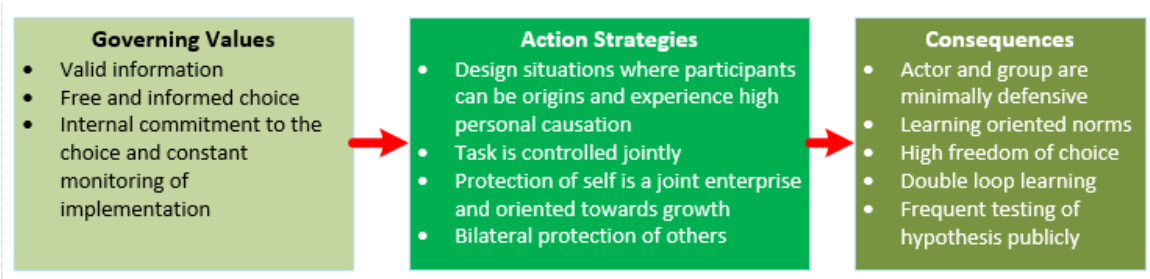


Source: Argyris (2002)

The consequences of Model I strategies, as indicated above, are likely to be miscommunication, misunderstanding and self-fulfilling and self-sealing processes (Argyris, 1982; Argyris, 2002). Individuals who use Model I Theory-in-use require defensive reasoning, which prohibits them from questioning their own beliefs and with that manage to maintain the status quo, which inhibits genuine learning (Argyris, 2002).

To be effective leaners, people need to progress to Model II learning. The aims of Model II are to assist people to produce valid information, make informed choices and commit internally to these choices (Argyris, 1977). Implicit in the Model II assumptions is that double-loop learning comes from having reliable information, being competent, personal responsibility and monitoring the effectiveness of one's decisions on an ongoing basis (Argyris, 1977). This is illustrated in Figure 4.12.

Figure 4.12: Model II Double-Loop Learning



Source: Extracted from Argyris (1977:118)

As shown above, in model II double-loop learning people are not as defensive, which makes them open to learning. They are also willing to surface and test their assumptions. A key result of double-loop learning is the ability to combine advocacy and encourage enquiry (Argyris, 1977).

Organisations struggle to learn in a double loop manner (Argyris, 1977), which leads to a need to address structures and strategies of learning called deuteron-learning by Bateson (1973), systems thinking by Senge (1990) or triple loop learning by Flood and Romm (1996). Triple loop learning is about increasing the depth of learning through using existing local infrastructure (Flood and Romm, 1996). It is about learning how people learn through understanding their beliefs and perceptions (Flood and Romm, 1996).

4.4.9.1 Assumptions of Double-loop learning

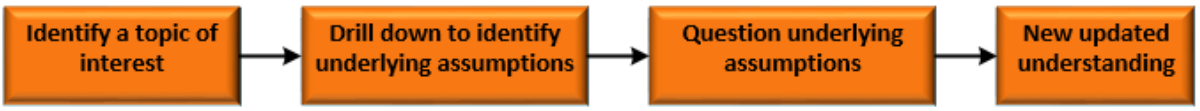
Although Argyris and Schon did not substantiate their assumptions (Sekar, 2017), the following assumptions can be gleaned from their work.

- Learning occurs when understanding, insight and explanations are connected to actions (Argyris, 2003);
- Learning always implies effectiveness i.e. was the intended result actually produced (Argyris, 2003);
- There is a need for an ongoing challenging and testing of assumptions if one wishes to fully resolve identified problems (Blackman et al., 2004); and
- There is an inherent assumption that people desire double-loop learning but unwittingly apply single-loop learning (Sekar, 2017). This is contrary to bounded rationality theory, which argues that people do not always choose the best alternative, but the most satisfactory option (Sekar, 2017).

4.4.9.2 How should instructions be designed in line with double-loop learning theory?

Double-loop learning is achieved through a good deal of communication and dialogue among learners (Cartwright, 2002). The teacher drills down a topic of interest in order to surface the take-for-granted assumptions of learners (Cartwright, 2002). The teacher then assists the students to question those underlying assumptions (Argyris and Schon, 1978). The teacher may ask students to identify the factors that led them to adopt a particular standard and what underlying contradictions they can identify in those standards (Cartwright, 2002). This process is illustrated in Figure 4.13 below.

Figure 4.13: Double-loop learning instructional design



Source: Author's own illustration

From the above illustration it is apparent that to gain an updated understanding there is a need to have an in-depth understanding of the theory-in-use. This would help with critically evaluating whether or not it will lead to an enduring solution.

4.4.9.3 Strengths of double-loop learning theory

According to Richardson (2014), double-loop learning theory encourages continuous improvement in both individuals and organisations. It sets high standards and expectations of people in terms of reflexive thinking, candour and commitment to personal change (Richardson, 2014).

Double-loop learning can prevent the recurrence of errors in the future (Richardson, 2014). This is because if done correctly, it leads to the evaluation of the assumptions or values that led to the initial error.

4.4.9.4 Criticism of double-loop learning theory

Double-loop learning rests on the assumption that knowledge can be true and a person can reach a position of knowledge that is not doubted (Blackman et al., 2004). Such a condition is not really possible, as all knowledge is tentative and contingent and knowledge that was true, over time, can be indistinguishable from superstition (Blackman et al., 2004). It is possible for objective reality to exist without anyone knowing it, which would mean that in many instances existing assumptions cannot be tested reliably (Blackman et al., 2004). When testing assumptions, it may become apparent that what is believed to be knowledge is based on untested or untestable assumptions (Blackman et al., 2004).

Double-loop learning is not an ongoing process of knowledge creation. It is only engaged in once a mismatch has been identified (Blackman et al., 2004). Another challenge with double-loop learning is defensive reasoning (Argyris, 2003). This is the reality that correct diagnosis of a problem does not always lead to corrective action (Argyris, 2003). People can choose to keep their old behaviours and practices, either because change is difficult or there is not enough incentive to change.

While double-loop learning is clear and well thought out, it is difficult to implement (Richardson, 2014). People's lives are managed by so many faulty mental models that need to be changed in order to improve their productivity (Richardson, 2014). However, it is daunting to make changes. Psychologically a person can only make a few changes at a time, usually only two or three (Richardson, 2014). There is significant emotional effort required to notice gaps, search for mental models and make corrections, especially as many of these errors in mental models are our own fault (Richardson, 2014). In light of this, many people give up, as it requires a great deal of courage and energy to engage in double-loop learning (Richardson, 2014).

Double-loop learning is a formidable theory that is similar to transformative learning theory in that it is interested in understanding the underlying assumptions that lead to a particular error. However, the main difference is that while double-loop learning is mainly aimed at error correction i.e. when there is a mismatch between expected and actual outcomes (Blackman et al., 2004), transformative learning usually arises from a disorienting dilemma (Mezirow and Marsick, 1978). Notwithstanding this difference, double-loop learning is a useful approach in entrepreneurial training for bringing underlying assumptions to the surface.

This section provided a detailed account of the different learning theories and the way in which they can be used in entrepreneurial training.

4.5 TRANSFORMATIVE LEARNING (JACK MEZIROW)

4.5.1 Brief History

Transformative learning theory originated from Jack Mezirow's research into re-entry programmes for women into community colleges in the United States of America (Mezirow and Marsick, 1978). These programmes were aimed at assisting middle class women who were considering up skilling themselves for employment after an extended period of break (Mezirow and Marsick, 1978). Mezirow, (2009) argued for the recognition of frames of reference in adult learning, which affected their thinking, feeling and acting.

Mezirow's work was significantly influenced by Freire's 'conscientisation', Kuhn's 'paradigms', the concept of 'consciousness raising' prevalent in the women's movement, Roger Gould's writings, Jurgen Habermas, Harvey Siegal and Herbert Fingerette (Mezirow, 2009). Freire argued that disorienting dilemmas (discussed below) can be induced to produce perspective transformation (Mezirow and Marsick, 1978). Roger Gould advanced the example of childhood assumptions that must be re-examined to allow adults to respond effectively to challenges encountered in adulthood (Mezirow and Marsick, 1978).

Habermas makes a distinction between instrumental learning and communicative learning (Mezirow, 2009). Communicative learning is a discourse leading to the establishment of a valid belief (Mezirow, 2009). Roger Gould's contribution to transformative learning theory was through epigenetics, which argues that traumatic events in childhood produce anxiety in adults that inhibits action, such as excessive fear, inability to finish a job or feeling sexual (Mezirow, 2009).

Since the formulation of Mezirow's transformative learning theory, other scholars have advanced alternative perspectives. For instance, John Dirkz focused on an extra-rational approach that included intuitive and emotional ways of knowing (Kroth and Cranton, 2014). Belenky and Stanton (2000) viewed transformative learning as learning in terms of relational processes (Kroth and Cranton, 2014). Taylor and Cranton (2012) proposed the need to extend transformative learning theory to include cognitive and rational perspectives, extra rational perspectives, with an emphasis on social change and a relational approach to peaceful co-existence. They argue that such integration would strengthen the theory and make it more relevant in fostering individual transformation.

4.5.2 Background

Learning can either be a simple elaboration of existing paradigms, feeling or behaviour or can be transformative, which would lead to a shift in the learner's existing paradigm (Roberts, 2013). Unlike children's learning, adults attempt to fit all new information into existing meaning schemes and reject that which does not fit (Mezirow, 1992). Every individual has a particular worldview, which may or may not be well-articulated and stem from their upbringing, life experience, culture and education

(Christie et al., 2015). New information is used to re-inforce established meaning schemes (Mezirow, 1992). People have causal assumptions, which are often ingrained and well-rehearsed (Christie et al., 2015). Unfortunately these adult meaning schemes, which were often acquired uncritically during childhood (through socialisation and acculturation), distort thought processes, which in turn influences behaviour (Mezirow, 1991). To significantly change an adult's behaviour, transformative learning needs to occur.

In general transformative learning is not entirely accepted by adults. Most people are in constant fear of change, as they are born entirely reliant on others (West, 2014). Transformation at times requires a break from the socialising experience and the realisation that one is a unique individual (West et al., 2016). Modernism requires to break with the traditional way of seeing things, where in the past the way of life was dictated by the culture of a tribe, to a new self-authoring mind-set where people are expected to make judgements in an environment characterised by ever-proliferating pluralism, multiplicity and competition for loyalty to a given way of living (Kegan, 2000).

An individual can never be fully transformed in the sense of no longer needing further transformation. Transformation is always provisional and the struggles are never complete (West, 2014). Transformation is a process rather than a point of arrival, given the fragility, as well as resilience, of people (West, 2014).

In context of this study transformative learning is defined as a "process by which we transform problematic frames of reference (mind-sets, habits of mind, meaning perspectives) sets of assumptions and expectations- to make them more inclusive, discriminating, open, reflective and emotionally able to change" (Crowther and Sutherland, 2008:26; Mezirow, 2009). Before exploring transformative learning further, it is important to understand a number of key terms.

First, it is important to know what *transformation* is. *Transformation* in transformative learning theory is perspective transformation (Mezirow and Marsick, 1978). *Meaning perspective* are psychological structures in which people locate and define themselves and their relationships (Mezirow and Marsick, 1978). These meaning perspectives are shaped by social, political, economic, psychological and religious assumptions and realities (Mezirow and Marsick, 1978). Central to transformation is epistemological change, that is, change in the way in which one creates meaning and not just behavioural change or quantity of knowledge (Taylor, 2008).

Frames of references refer to the language a person uses to create meaning and provide coherence of their experience (Mezirow, 2009). The frames of reference shape and delimit "perception, cognition and feelings" and pre-programmes a person to move automatically from one mental or behavioural activity to another and at the same time reject ideas that fail to fit into their relevant frame of reference (Mezirow, 2009). At the heart of frame of reference is the form of knowing (Kegan, 2000). In this sense,

transformative learning is a change in the form of knowing, which equates to a change in epistemology (Kegan, 2000).

Habits of mind is the same as "meaning perspectives", "points of view" and "meaning schemes" and refers to a "set of assumptions which acts as a filter for understanding experience" (Kroth and Cranton, 2014). Habits of mind control what people see and those other things they do not see (Kroth and Cranton, 2014). This is the way people automatically think, feel and act without question or further thought about the behaviour (Kroth and Cranton, 2014).

Another critical concept in transformative learning is a distinction between *instrumental leaning* and *communicative learning*. *Instrumental learning* refers to learning to control the external environment and other people, the results of which can be verified objectively (Mezirow, 1990). The learning can be measured in terms of productivity, performance or behaviour (Mezirow, 1990). On the other end is *communicative learning*. This involves understanding the meaning of what other people are communicating (Mezirow, 1990). This type of learning is dominated by norm-governing concepts such as judgements, propositions, beliefs, opinions or feelings (Mezirow, 1990). Communicative learning cannot be verified objectively through testing hypotheses but by intuitively searching for themes and metaphors (Mezirow, 1990).

According to Illeris (2014), the target for transformation should be one's identity, as one's identity contains all the dimensions of being human, namely cognitive functions, learning ability, social and emotional factors. If a person does not change any element of their identity, then transformation has not occurred for the purposes of this study. That change in self-perception is the form that transforms (Kegan, 2000).

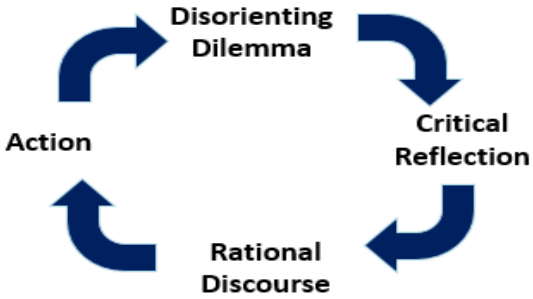
It should be highlighted that achieving transformative learning though a noble cause is not easy (Heddy and Pugh, 2015). Teachers who aim for transformation are likely to be disappointed for a number of reasons, most of them beyond their control, such as class sizes, task completion pressure and other administrative responsibilities they have to fulfil (Heddy and Pugh, 2015). The teacher can legitimately aim for transformative experiences that are less dramatic but can progress to achieve transformative learning (Heddy and Pugh, 2015). Transformative experiences are smaller transformations that occur when students are able to apply classroom concepts to their everyday lives in a meaningful way (Heddy and Pugh, 2015).

The next section presents a discussion of the transformative learning process as conceptualised by various scholars.

4.5.3 Transformative Learning Process

Various authors provide slightly different phases of transformation. For instance, Nohl (2015) provides transformation as a five step process. The first step is (1) a non-determining beginning, followed by (2) an experimental and undirected inquiry. The third phase is (3) social testing and mirroring, followed by (4) shifting of relevance and finally, (5) social consolidation and reinterpretation of biography. Mezirow, Mezirow and Marsick (1978) posit a 10 step process, which is shortened by (Kitchenham, 2008) into a 4 step process. According to Kitchenham (2008), the transformative learning process is underpinned by four main stages, namely significant experience (disorienting dilemma), critical reflection, rational discourse and action. This is the process adopted by this research and it is illustrated in the following schematic diagram.

Figure 4.14: Transformative Learning cycle



Source: Researcher's own illustration

These four themes are discussed briefly below.

4.5.4 Disorienting Dilemma/Significant Experiences

Transformative learning is triggered by a disorienting dilemma, which is a life crisis or a gradually growing sense of dissatisfaction with one's situation in life (Mälkki, 2012). A disorienting dilemma can occur naturally or in a facilitated setting, induced by a teacher (Mälkki, 2012). Naturally occurring disorienting dilemmas can be from internal personal crises or external crises (Mezirow and Marsick, 1978). Disorienting dilemmas can have a non-determining beginning (Nohl, 2015). In this case, disorienting dilemmas can be a result of an accumulation of small incidents that converge to initiate the transformative process (Hathaway, 2017). Circumstances that are slow moving and indefinite can trigger one to search for something that seems to be missing in one's life (Roberts, 2013).

Induced disorienting dilemmas can take the form of a teacher exposing the learner's limitations, providing feedback or questioning the learner's assumptions (Roberts, 2013). When disorienting dilemma is induced, it can lead to shame, arguments and at its worst, trigger stress, anxiety and depression (Roberts, 2013). When artificially induced by the teacher, students experience a love-hate relationship with the teacher that can lead to reduced participation in class, absenteeism and a decrease in punctuality, with some dropping out of the class completely (Roberts, 2013).

According to Mezirow (1990), disorienting dilemma can also be triggered by something as simple as an eye-opening discussion, book, poem or efforts to understanding a new culture that operates differently from one's own. Reading fiction can also create disorienting dilemmas, where the student can experiment with imaginary alternatives (Jarvis, 2006).

The disorienting dilemma occurs in a culture that is supportive and reinforces a particular way of seeing things, which a person begins to assume without question (Kitchenham, 2008). When a radically new experience, which cannot be assimilated, is encountered, it is either rejected out-right or the meaning perspective has to be changed (Kitchenham, 2008). When experience forces a person into a disorienting dilemma, where old ways of thinking and knowing can no longer make sense, this triggers critical reflection (Mezirow, 1990), which is the second stage in the transformative learning process.

4.5.5 Critical Reflection

To understand critical reflection it is necessary to first briefly discuss reflection so as to distinguish it from critical reflection. Reflection refers to the process of assessing the grounds of one's beliefs (Mezirow, 1990). Dewey (1997) defines reflection as a careful consideration of beliefs or any form of knowledge in light of the evidence in support of it. It can also be seen as a mental process in which people explore their experiences in order to gain a new understanding (Mann et al., 2007). It is argued that reflection is at the core of adult education (Mälkki, 2012).

Reflection can be divided into content reflection and process reflection (Mezirow, 1990). Content reflection is an examination of the content or description of an issue in order to understand it (Williams, 2000). Merriam (2004) refers to this as thinking about the actual experience. Content reflection answers the question "What". For instance, in entrepreneurship training the training could be covering something such as the characteristics of a successful entrepreneur. Process reflection is an exploration of the problem solving strategies used to arrive at a solution (Williams, 2000). According to Merriam (2004), process reflection is thinking of the way in which to handle an experience. For instance, in entrepreneurship training a student might ask, 'How do I register my company with CIPC?'

Critical reflection takes process or content reflection a step further. Critical reflection is central to transformative learning (Merriam, 2004) and without critical reflection, it is unlikely that transformative learning will ever occur (Feinstein, 2004). Critical reflection occurs when a person questions "the assumptions upon which [their] interpretations, beliefs, and habits of mind or points of view are based" (Mezirow, 1997). In a way, critical reflection can be about the assumptions people hold of themselves, their cultural systems (systematic), their workplace, ethical decision making, feelings or dispositions (Merriam, 2004). In adulthood a person needs more than an awareness of the source and context of knowledge, but also a critical reflection of the validity of assumptions or premises (Mezirow, 2000a). Kitchenham (2008) holds that this questioning of assumptions occurs in response to a perceived contradiction between thoughts, feeling and actions.

Telling or reading stories can be used as tools for critical reflection (Kroth and Cranton, 2014). Stories can expose the reader to alternative ways of seeing issues, different from oneself (Kroth and Cranton, 2014). Stories can highlight the way in which a person is positioned in a certain culture with certain power and privileges. When a learner reads such stories of other people, this could lead to challenging a number of long held values and assumptions (Kroth and Cranton, 2014). For instance, in entrepreneurship training, an entrepreneur's struggles can help students to critically question their assumptions about what it takes to be a successful entrepreneur.

Not everyone can perform critical reflection. According to Merriam (2004), a person needs to be at a certain level of cognitive maturity to be able to undertake critical reflection. For instance, if Piaget's levels of development are used, then a person should be beyond the fourth stage of development, (formal operation), to be able to critically reflect on their own premises (Merriam, 2004). A study by Bee (2000) revealed that only half of all adults in the study operated at Paget's formal operations level. Taylor (2007) argues that there is a generous assumption in existing literature that critical reflection has taken place, based on the ability of participants to articulate their experiences or their ability to remember critical reflection. Unfortunately, not all adults have the ability to perform critical reflection (Bee, 2000). Assuming critical reflection has occurred, the next step in transformative learning is for a person to conduct reflective discourse.

4.5.6 Rational/Reflective Discourse

Reflective discourse is used to weigh the evidence, supporting or contradicting a position and critically evaluate alternatives (Mezirow, 2000b). Rational discourse is only employed when people are testing the truth and appropriateness of their thinking in relation to norms or testing the authenticity of their feelings or questioning the credibility of the person making the statement (Mezirow, 1991). This leads to tapping into "collective experience" in order to arrive at a tentative judgement (Mezirow, 2000b).

The discourse is rational in the sense that a person participates in it with an open mind, learning to listen with empathy, seeking common ground and not judging prematurely (Mezirow, 2003). The learner should be able to participate fully and freely in the discourse in order to validate beliefs and find common ground (Mezirow, 2000b).

The pre-requisite for participating in reflective discourse is "finding one's voice" (Mezirow, 2000b). The participant should know where they stand on an issue to engage effectively in fruitful reflective discourse. In addition to "finding their voice", the participant should be emotionally intelligent, that is, able to know and manage his/her own emotions, recognise the emotions of others and handle relationships (Goleman, 1998). To engage in reflective discourse the learner should be able to evaluate alternative perspectives, withhold premature judgement and think dialectically (Merriam, 2004), have complete information, be free from self-deception and have equal an opportunity to participate (Mezirow, 1995).

In transformative learning, a person can only justify holding on or letting go of a problematic belief through rational discourse (Mezirow, 2000b). To effectively engage in rational discourse, an individual will rely on what Gardener (1999) posits as interpersonal and intrapersonal intelligence. Interpersonal intelligence being the ability to understand the perspective of other people, while intrapersonal intelligence is the ability to understand your own moods, desires, motivations and intentions (Davis et. al, 2011).

The discourse is deemed rational if the student assesses objectively and can provide reasons supporting his options and position (Mezirow, 2000b). The person should not just appeal to a higher authority, such as an expert, tradition or higher force (Mezirow, 2000b). In transformative learning rationality refers to the ability of the learner to "negotiate his or her own purposes, values, feelings, and meanings rather than simply acting on those of others" (Mezirow, 2000b: 10).

According to Feinstein (2004), it is unlikely that transformative learning will occur without rational/reflective discourse. This is mostly because without rational discourse with other parties, it is difficult for a person to identify and critically evaluate their own assumptions.

While Mezirow views reflective discourse as being essential for transformation, Dix (2016) argues that it is not always necessary. A person can transform him/herself into an expert dancer, not through discourse, but through appreciating their limited dancing repertoire and taking the necessary steps to improve.

In entrepreneurship, reflective discourse can be used for students to explore the mind-set and conditions required to be a successful entrepreneur. This discussion could help surface long held assumptions by students, which after discussion could lead to transformation of a mind-set and subsequent action. However, in line with Dix (2016), it should be highlighted that some transformation can occur in entrepreneurs through their adaptive behaviours, which are necessary for a successful business.

4.5.7 Action

The course of *action* taken by an individual on the transformative learning path will be based on the results of critical reflection and rational discourse. According to Kitchenham (2008), at the highest level of transformative learning is an individual who thinks critically about his present conditions and points of view and decides to take action towards change. In Mezirow's ten-step process of transformative learning, it can be said that from step 5 through to step 10, a person is taking steps towards change based on new understanding. These action steps are (Mezirow, 2000b):

- exploring available options based on new roles, relationships and actions;
- planning the course of action to be taken;

- enhancing knowledge and skills to implement the plan;
- trying out the new roles that have been selected;
- improving skills and self-confidence in the new role and
- reintegrating the new role into one's life based on the revised perspective.

The preceding sections presented the core aspects of transformative learning theory, which forms the backbone of this research. Before we delve into the way in which it is applied in this research, it is important to discuss the criticisms levelled against the transformative learning theory.

4.5.8 Criticism of Transformative Learning Theory

The enduring criticism of Mezirow's transformative learning theory is that it stresses cognitive dimensions at the expense of other dimensions, such as emotional and social (Merriam, 2004; Illeris, 2014). There is a need to develop a unified transformative theory that incorporates cognitive, rational and extra rational perspectives, a theory that emphasises social change and relational approaches (Taylor and Cranton, 2012). Nohl (2015) argues that despite acknowledging the criticism, Mezirow did not really integrate non-rational factors into his theory and keeps emphasising cognitive and rational perspectives.

The transformative learning process does not always commence with a disorienting dilemma, the beginning could be non-deterministic (Nohl, 2015). This means the incident that leads to transformation could seem unimportant when first experienced by the individual but through coincidence or mild interest could lead to transformation (Nohl, 2015). In this line of reasoning, there is no straight line between initial incident and ultimate transformation.

Another criticism of the theory is that it has been applied mostly in unusual learning circumstances. Initially the theory was based on women returning to school after a long hiatus (Mezirow and Marsick, 1978). Other studies were on the transformation of HIV-positive individuals (Baumgartner, 2002). Groups analysed were limited to specific social groups and it is unclear whether or not the theory would apply in other contexts (Nohl, 2015). Similarly, Taylor (2007) argues that transformative learning locks itself in formal settings such as universities and workshops. There is a need to expand the scope to more informal settings that are susceptible to greater external influence.

It is unclear "what forms transforms?", that is, what is the target of transformation (Kegan, 2000). The challenge with Mezirow's transformative theory is that the language is now being used so loosely in a myriad of contexts, that the meaning has become distorted and any change can be deemed transformative (Kegan, 2000). In this context, Kegan (2000) advises that transformative learning needs to be narrowed

by focusing on the epistemological and at the same time broadened to incorporate the whole of life, not just adulthood and adult learning.

Newman (2014) argues that transformative learning is inappropriate for a significant amount of learning that occurs in the world. There is a significant amount of competence learning that occurs, which transformative learning neither caters for nor is necessary (Newman, 2014).

Transformative learning makes a significant claim that borders on being extravagant (Newman, 2014). For instance, O'Sullivan (2012) defines transformative learning as

> A *shift of consciousness that dramatically alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class, race and gender; our body awareness, our visions of alternative approaches to living; our sense of possibilities for social justice and peace and personal joy* (O'Sullivan, 2012:164).

It is difficult to find training that will achieve the transformation defined by O'Sullivan (2012). Can any learning really achieve all this? (Newman, 2014). Having highlighted a critical review of transformative learning, f the next section presents a discussion of the way in which transformative learning was applied in this research.

4.5.9 Application of the Theory

Due to the extensive use of the transformative learning theory in various domains, the meanings evolved into something relatively different from Mezirow's original conceptualisation (Hoggan, 2016). Without a clear understanding of what transformation is, any change could be deemed transformative, which would rob the theory of its effectiveness. Hoggan (2016) provides a useful typology that was used in this research. However, to understand the typology there is a need to accept that there are four main approaches to transformative learning, namely psycho-critical, psycho-developmental, psychoanalytical and social emancipatory (Taylor, 2008). These approaches are described briefly below.

- *Psychocritical approach:* This is the approach mostly attributable to Mezirow (Hoggan, 2016). With this approach people have 'habits of mind' that dictate the way in which they create meaning of the world around them (Hoggan, 2016). These habits of mind change following a ten-step process proposed by Mezirow, beginning with a disorienting dilemma (Mezirow, 2000b; Mezirow and Marsick, 1978).

- *Psychoanalytical approach:* This approach emanates from the work of Carl Jung, whose work was mostly focused on the expansion of the ego (Hoggan, 2016). According to Dirkx (2012), transformation is when individuals become more aware of their own unconscious and its

significant influence. This involves increased integration of inner and outer worlds resulting is greater self-awareness and authenticity (Hoggan, 2016). This approach involves working through emotions to deepen an understanding of oneself (Dirkx and Espinoza, 2017). Emotions are not treated as things to be managed, controlled or manipulated but as a way that gives voice to the human sense-making process (Dirkx and Espinoza, 2017).

- *Psycho-developmental Approach:* Transformative learning in terms of this approach is an increase in cognitive capacity (Hoggan, 2016). Transformation in this sense is a refinement of a sense of self (Kegan, 2000). This type of transformation involves being validated and challenged by life experiences and peers (Hoggan, 2016). According to Kegan (2000), this transformation is indicated by a change in the way a person sees the world.
- *Social emancipatory approach:* This approach is about people developing critical consciousness in the way they perceive themselves in relation to the world around them, constituted by unfair social practices, norms and institutions (Hoggan, 2016). To be a truly transforming person means actively participating in the world to attempt to make it more just and equitable (Hoggan, 2016). This is based on the work of Paulo Freire (Hoggan, 2016), who argued for education to be at the centre of assisting learners to develop the perspectives, skills and confidence needed to actively engage the world to make it better.

The researcher used the typology of transformative learning theory that was suggested by Hoggan (2016). In that typology transformation is deemed to have occurred if a significant change has occurred in one of the areas described below.

- **World view**: A significant change in the way in which a learner understands the world, which could be in any of the following:
  - assumptions, beliefs, attitude or expectations (Mezirow, 2000b);
  - ways of interpreting experience (Hoggan, 2016);
  - more comprehensive or complex worldview (Hoggan, 2016) and
  - new awareness or understanding (Hoggan, 2016).
- **Self**: transformation in the way one see oneself in any of the following areas (Hoggan, 2016):
  - self in relation to the world or in relation to others in the world;
  - increased feeling of empowerment through feeling greater mastery;
  - identity - the way one sees oneself;
  - increased knowledge of self such as strengths, limitations and motivations;
  - personal narratives becoming a more coherent way of explaining one's life (Kroth and Cranton, 2014) and
  - meaning or purpose of one's life shifting.

- **Epistemology**: a significant shift in the way people construct or evaluate knowledge in their day to day living, for instance:
  - becoming more discriminating;
  - using extra-rational ways of knowing - not being restricted to logic e.g. emotional, spiritual, reflective etc. (Dirkx and Espinoza, 2017; Dirkx, 2012) and
  - becoming more open - not clinging too tightly to one's way of creating meaning.

- **Change in behaviour** by the person, for instance:
  - people behave in a way that is consistent with their new perspective;
  - they are involved in social activism;
  - they change their professional practices and
  - they develop new skills.

- **Capacity**: refers to learners experiencing qualitative changes to allow greater complexity in their lives, as through greater cognitive development, more consciousness or spirituality (Hoggan, 2016).

- **Ontological**: refers to a deeply established mental or emotional inclination that affects one's existence (Hoggan, 2016). These changes could be seen in the following areas:
  - affective experience of life (learning to live with joy);
  - ways of being (changes to habits and dispositions);
  - change in personal attributes, such as generosity, compassion, empathy, trust etc.

This research explored the impact that entrepreneurship training or teaching has on students who participated in the SHAPE programme. More specifically, did the training offered during the SHAPE programme transform the students in four ESE dimensions summarised by Kitchenham (2008) as; opportunity recognition, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy? Was there a change in ESE in any of the following areas: their worldview; their sense of self; their epistemology; their capacity, behaviour or ontology (Klenke et al., 2016)? This research was undertaken using a longitudinal study where the level of ESE was assessed at the beginning, during and at the end of the programme. If there was any significant change in the constructs, it could be deemed transformative.

4.6 CONCLUSION

This chapter introduced the notion of learning and transformative learning. The highlighted that transformative learning is not incremental but a break from past beliefs and assumptions. Nine learning theories are explored, from behaviourism, to cognitive learning, constructivist learning, social learning, andragogy, self-directed learning, experiential learning and double-loop learning. This is followed by a detailed discussion of transformative learning. The question asked by Kegan (2000) with regard to

transformative learning was “what form transforms?” and this research adopted a response by Illeris (2014), it is a person’s identity that transforms. However, in reality there is a typology of the areas that can transform that was provided by Hoggan (2016). The chapter concludes with the way in which transformative learning was applied in this research using the typology advanced by Hoggan (2016). All these learning theories are discussed as a pathway to developing a transformative leaning model into ESE. This is based on the understanding that one of the key expectations of students is that entrepreneurship courses will transform them to initiate their own businesses (Chimucheka, 2014).

CHAPTER 5
RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter discusses several research designs and methodologies inherent in social science research, specifically focusing on the design and methodology followed in this research. The purpose of this research was to develop entrepreneurial self-efficacy using a transformative learning theory approach. First, various research designs are discussed, including research philosophy, approaches to research, research strategies and time horizons. This is followed by a discussion of research methodology, which includes sampling methodology, sample size, data collection methods, data analysis and the study site. Issues of data quality and integrity are discussed with reference to issues of reliability and validity. This is followed by a discussion of ethical considerations and the limitations of the study. A framework followed by the SHAPE programme is then provided. The chapter closes with a discussion of the pilot study conducted for this study.

5.2 RESEARCH QUESTIONS AND GOALS

The research question refers to the specific question the research is trying to find an answer to (Wieringa, 2014) and narrows the research aims and goals to specific area of interest (Doody and Bailey, 2016). Research goals relate directly to the research question (Doody and Bailey, 2016) and are both generally aimed at improving society and promoting the wellbeing of people (Wieringa, 2014). In this research, the research questions and goals for this study are presented next.

5.2.1 Research Question 1 and Goals

Many times the experience of a life crisis introduces a disorienting dilemma, the same as a gradual growing sense of dissatisfaction with one's situation in life can (Mälkki, 2012). The disorientation experienced is expected to open up participants to developing their ESE. The first research question this research sets out to answer is;

RESEARCH QUESTION 1: To what extent does disorienting dilemma (significant experiences) develop entrepreneurial self-efficacy?

RESEARCH GOALS the following research goals were formulated to investigate research question 1 after conducting in-depth review of existing literature:

A. To determine if disorienting dilemmas (significant experiences) develop opportunity identification self-efficacy.

B. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's relationship self-efficacy.

C. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's managerial self-efficacy.

D. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's tolerance self-efficacy.

5.2.2 Research Question 2 And Goals

Critical reflection involves questioning long held assumptions. These are assumptions someone holds about themselves, their culture, their work, ethics and feelings (Merriam, 2004). The process of critical reflection is expected to open up participants to developing their ESE. The second research question therefore is;

RESEARCH QUESTION 2: To what extent does critical reflection develop entrepreneurial self-efficacy?

RESEARCH GOALS: Pursuant to question 2 above, following research goals are set out to investigate whether critical reflection can develop the 4 key aspect of ESE.

A. To determine if critical reflection develops opportunity identification self-efficacy.

B. To determine if critical reflection develops relationship self-efficacy.

C. To determine if critical reflection develops managerial self-efficacy.

D. To determine if critical reflection develops tolerance self-efficacy.

5.2.3 Research Question 3 and Goal

Rational discourse is only employed when people are testing the truth and appropriateness of their thinking (Mezirow, 1991). It can only be done by a participant who has "found their own voice" (Mezirow, 2000b), is emotionally intelligent (Goleman, 1998) and has interpersonal and intrapersonal intelligences (Gardener, 1999). By participating in rational discourse, it is expected that ESE will be developing. The third study question therefore is;

RESEARCH QUESTION 3: To what extent does reflective discourse develop entrepreneurial self-efficacy?

RESEARCH GOALS: If a person can participate in rational discourse to develop their ESE, this study then sets out the following goals:

A. To determine if reflective discourse develops opportunity identification self-efficacy.

B. To determine if reflective discourse develops relationship self-efficacy.

C. To determine if reflective discourse develops managerial self-efficacy.

D. To determine if reflective discourse develops tolerance self-efficacy.

5.2.4 Research Question 4 and Goal

Transformative learning is characterised by an individual who adopts a new mind set and decides to take action to achieve desired change (Kitchenham, 2008). Through taking action, a person is becoming more efficacious in the sense on developing their ESE. The fourth study question therefore is;

RESEARCH QUESTION 4: To what extent does action develop entrepreneurial self-efficacy?

RESEARCH GOALS: It is expected that through entrepreneurial action, a person can further develop their ESE. This study then sets out the following goals:

A. To determine if action develops opportunity identification self-efficacy.

B. To determine if action develops relationship self-efficacy.

C. To determine if action develops managerial self-efficacy.

D. To determine if action develops tolerance self-efficacy.

5.3 RESEARCH DESIGN

A research design is the overall plan that connects the conceptual research problems to the empirical research (Babbie, 2015; Wyk, No Date). The research design determines the data that is required, the methods to be used to collect and analyse the data and the way in which the research question will be answered (Babbie, 2015; Wyk, No Date). Yin (2013) holds that the research design is what links the question to the data that is collected, which eventually leads to the conclusions. According to Nedha (2015), the research design determines the research methods and all the steps that need to be taken.

Gorard (2013) emphasises the importance of rigorous research designs, as they have a significant influence on the outcome of the research. The research design with regard to a particular subject should provide a reasonable degree of stability or certainty that the explanations provided are superior to competing explanations (Bechhofer and Paterson, 2012). Typically, research designs are guided by research philosophy or paradigms, which are a set of beliefs of the way in which the particular research views the world (Killam, 2013). These research paradigms are discussed briefly below.

5.3.1 Research Paradigms

The term research paradigm was first used by Kuhn (1962) to indicate a conceptual framework shared by a community of scientists, which provided them with a model with which to investigate problems (Antwi and Hamza, 2015). In other words, research paradigms influence the perception of the things people can see (Killam, 2013). According to Guba (1990) as cited in Patel (2015), research paradigms are characterised through their ontology (What is reality?), epistemology (What is truth and legitimate knowledge?) and methodology, (How do you find the information?). A research paradigm directs research effort, mostly to the exclusion of other paradigms (Kuhn, 1962).

The most common research paradigms are positivism, constructivism/interpretivism and pragmatism (Patel, 2015). Positivism is based on an ontological understanding that reality is objective and understandable and can be measured (Klenke et al., 2016) independent of the viewer (Aliyu et al., 2014). With positivism, knowledge is acquired in a value neutral way and has no moral content (Klenke et al., 2016). A researcher who uses positivism subscribes to the idea that the world is governed by an unchanging set of rules of cause and effect and these rules could be understood through reductionism (Aliyu et al., 2014). Aliyu et al. (2014) hold that positivism is actually in opposition to non-positivism and a researcher has to carefully evaluate each research paradigm before employing it.

This study did not use the positivism paradigm. Positivism assumes scientific objectivity, which exclude personal feelings in influencing subject under study and conclusions reached (Klenke et al., 2016, Babbie, 2011). The researcher selected the area of study and the conclusion presented are a result of the researcher's evaluation of the research results. The study would then fail the test of objectivity as required by a positivist paradigm.

With constructivism it is believed that reality is created socially and is local and specific in nature (Klenke et al., 2016). Knowledge is based on mental constructions about which there is relative consensus (Klenke et al., 2016). Reality is simply a mind construction and there is no real merit in assuming that the reality being researched really exists publicly (Aliyu et al., 2014). Understanding reality is subjective and dependent on the researcher (Aliyu et al., 2014). However, it should be noted that constructivism acknowledges that there is a real world out there but the meaning of that world is imposed by the researcher (Duffy and Jonassen, 2013). In light of this thought process, constructivism argues that there is no ultimate shared reality, only reality that is an outcome of the constructive process (Duffy and Jonassen, 2013).

This study did not use the constructivism paradigm. Constructivism assumes that reality is simply a mind construction (Klenke et al., 2016) and therefore undermines the idea of absolute truth (Loveless, 2001). This research assumes there is some absolute truth in issues such as gender and unemployment. These issues which are assumed to be true are fundamental to this study and as such, this study did not use constructivism.

Pragmatism is based on the understanding that reality is not stable but is rather being constantly renegotiated, debated and interpreted in terms of its usefulness in a given situation (Patel, 2015). Pragmatism avoids taking a particular view about truth and reality, as is central in other paradigms, and accepts that there are multiple realities but that focus should be mostly on attempting to solve the problem at hand (Yvonne Feilzer, 2010). In other words, the reality that matters is one that solves problems (Patel, 2015). The researcher using pragmatism should therefore be free from the strictures imposed by constructivism and positivism (Yvonne Feilzer, 2010). Reality is related to the experiential world, some objective and real, some subjective and also some that are a mixture of both objective and subjective (Yvonne Feilzer, 2010). According to Rorty (1991), research should not be overly concerned with producing the most accurate account of reality but on being as useful as possible. Central to pragmatism are the questions "what is it for", "who is it for" and "how did the researcher's values influence the research" (Yvonne Feilzer, 2010).

This research followed a pragmatic paradigm, as it is action research. Action research is part of the pragmatic paradigm, more specifically, pragmatic critical realism (Coghlan and Brannick, 2009). This approach focuses on epistemic reflexivity; and reflexivity is socially and historically constructed (Coghlan and Brannick, 2009). Research paradigms guide the research designs.

5.3.2 Types of Research Design

There are various ways to classify research designs, as quantitative, qualitative and action research. This research uses a qualitative research design called action research, as discussed in section 5.3.2.3. below. However, in the following paragraphs is a discussion of the different types of research designs.

5.3.2.1 Quantitative Designs

The positivist research paradigm is the basis of a quantitative research design (Tuli, 2011). A quantitative design is based on the ability to measure an amount (Kumar, 2008) and data is presented in the form of numbers (Punch and Oancea, 2014). The primary purpose is usually to determine whether or not a relationship exists between variables and if it does, the strength of that relationship (Mackey and Gass, 2015). Measuring a relationship is achieved statistically through computing correlations (Mackey and Gass, 2015). Quantitative designs include experimental, non-experimental and correlational designs. These are discussed briefly below.

Experimental Design

With an experimental design the researcher aims to maximise statistical efficiency by controlling extraneous variables, handling experimental units, analysing data and selecting specific designs (Babin. Carr & Griffin 2013; Broota, 1989). There are three types of experimental research design, namely single case experimental design, quasi experimental design and experimental design (Broota, 1989). With an experimental research design there is an element of some removal of the research subject from their

natural setting (Babbie, 2016; Hall, 2008). This study did not follow an experimental design, as it was deemed inappropriate for the subject at hand.

Non Experimental Design (Quasi-experimental)

The non-experimental design, like the experimental design, attempts to test a causal relationship (White and Sabarwal, 2014) outside the laboratory (Cook, 2015, Neuman, 2013). However, it differs from the experiment design in a number of key areas (Cook, 2015). For instance, unlike an experimental design, there are no random assignments to the experimental group and participants sometimes self-select into the treatment group. There is however a comparison group with similar characteristics as the treatment group (White and Sabarwal, 2014). At the end of the treatment, the treatment group is compared to the control group and any differences are attributed to the treatment (White and Sabarwal, 2014).

Correlation Designs

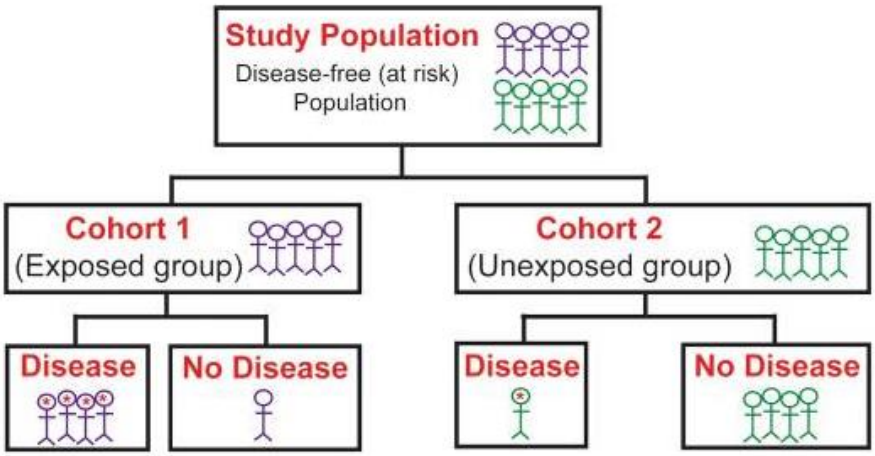
Correlational designs observe and report on relationships between two of more variables (MacDonald et al., 2015). Two or more variables are taken through a series of calculations to determine if there is covariance (a relationship) between them (Asamoah, 2014). Pursuant to this, correlation research generally represents a study that assesses the covariance between naturally occurring variables (Asamoah, 2014) without manipulation of those variables (Bacon and Locke, 2017)

There are various types of correctional design, such as cross-sectional designs, case-control designs, longitudinal designs and cohort designs (MacDonald et al., 2015). These types of correlational design are discussed next.

Cohort Study

A cohort study refers to a study design that identifies people exposed to a particular disease-causing factor and compares it to a similar group not exposed to the same factor and compares the occurrence of the disease in the two groups (Ibrahim, 2014). The occurrence of an illness to the exposed group points to the factor being associated with the disease (Ibrahim, 2014). This is illustrated in Figure 5.1 below.

Figure 5.1: Cohort Study



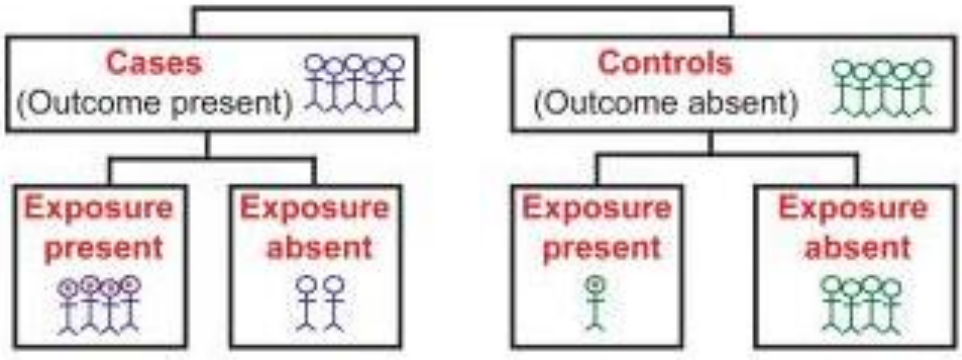
Source: (Song and Chung, 2010).

Due to exposure being identified before the outcome, cohort studies have a framework that can be used to assess causality (Song and Chung, 2010). One advantage of a cohort study is that it has a strong scientific framework (Song and Chung, 2010). Another advantage is that it is effective in the study of rare exposures (Song and Chung, 2010). The disadvantages of cohort studies are that a large number of study subjects is needed and it is also susceptible to selection bias (Song and Chung, 2010).

Case Control Study

In a case control design investigators identify a group of people who have developed a disease (the cases) and these are compared to people who do not have that disease (Song and Chung, 2010). Those with disease (the cases) and those without (the controls) are then compared with focus on the frequency of past exposures (Song and Chung, 2010). If the cases have a substantially higher exposure to a certain factor compared to the control subjects, this suggests an association (Song and Chung, 2010). This is illustrated in Figure 5.2 below.

Figure 5.2: Case Control Study

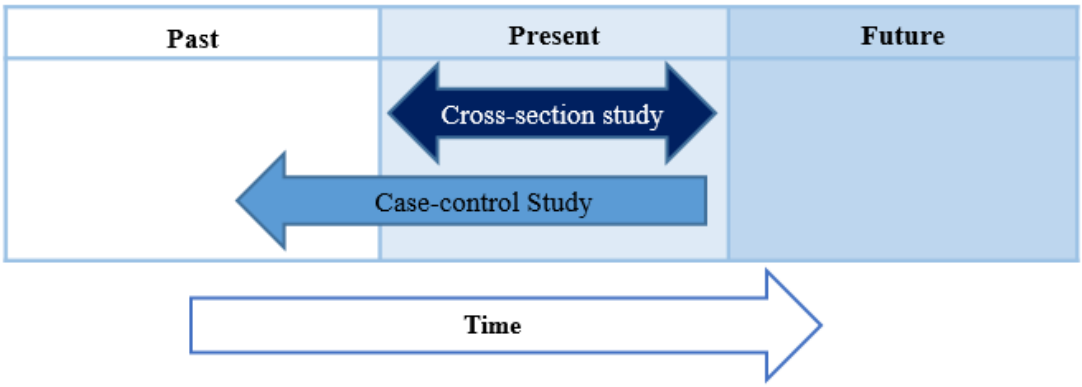


Source: (Song and Chung, 2010).

Cross-sectional Design

Cross-sectional research design is aimed at determining the frequency or level of a particular attribute in a defined population at a specific point in time (Charan and Biswas, 2013; Olsen and George, 2004). Using this approach, data is collected from at least two groups of people at a point in time and their variances in the dependent variable are compared (De Vaus and Vaus, 2013). A sample or the entire population is selected and data collected from them to answer a research question (Olsen and George, 2004). This is illustrated in Figure 5.3.

Figure 5.3: Cross-sectional studies in relation to time



Source: Adapted from Levin (2006:1)

Cross-sectional surveys are important in evaluating the practices, attitudes, knowledge and beliefs of a population (Dos Santos, 1999). They are also used to estimate the prevalence of the outcome of interest for a given population (Levin, 2006). Cross-sectional surveys are limited by the fact that they are taken at one point in time and as such give no sequence of events, which ultimately means one cannot infer causality (Levin, 2006). To minimise this weakness, a repeated cross-sectional study can be conducted, which will make the study a pseudo-longitudinal study.

The advantages of cross-sectional studies are that they are relatively inexpensive to run, a person can estimate the prevalence of a phenomenon in the whole population and many outcomes and risks can be assessed (Levin, 2006; Hulley et al., 2013). The disadvantage has already been mentioned; it is difficult to infer causality, as the study only provides a snapshot and results may differ at some other time (Levin, 2006; Hulley et al., 2013). This research did not follow a cross-sectional design as it was deemed to be inappropriate.

Longitudinal Design

This study used a longitudinal research design because through a longitudinal research, you can evaluate change over time. A longitudinal research design involves the repeated measurement of the same research subject over a period of time (Rajulton, 2001). A longitudinal research design involves data is collected for the same research units on more than one occasion to allow for a measure of variance over time or between individuals (Taris, 2000). This is primarily done to detect change over time. Ployhart

and Vandenberg (2010) recommend taking at least three repeated measurements. On the other hand, Menard (2008) recommends measuring variables over a minimum of two time periods, as opposed to three as recommended by Ployhart and Vandenberg (2010). This type of study is a significant improvement over case studies, as a research can, to an extent, examine change and draw some inference from the differences in variables after treatment or exposure to a phenomenon (Wang et al., 2017). The passage of time must be meaningful in the sense of the inference being made (Wang et al., 2017). This study measured participants' ESE at the beginning of the program, in week 7 and at the end, in order to determine if there was any statistically significant change in ESE.

A longitudinal research design can, with extreme caution, come closer to inferring causality (Wang et al., 2017). However, the relationships among these variables; dependent, independent and mediating, (each which could be static or dynamic), must be clearly defined (Ployhart and Vandenberg, 2010). It is also important to note that experimental designs are similar to longitudinal studies and Wang et al. (2017) argue that a truly experimental design is always a longitudinal study.

There are a number of methodological issues that should be informed by the nature of change in a longitudinal study, as identified by Ployhart and Vandenberg (2010), namely the need:

- to determine the optimal number and interval of measurements;
- to select samples likely to exhibit the hypothesised change;
- to plan up front for the attrition of the sample;
- to think through an appropriate time period to address the issues of causality and
- to evaluate the measurement properties of the variable for invariance, that is, a variable not changing over time despite treatment.

Ployhart and Vandenberg (2010) advise also considering analytical issues, such as:

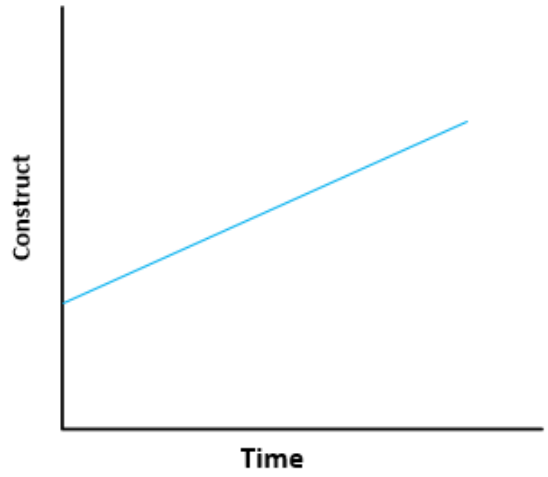
- being cognisant of the potential violation of the statistical assumptions that characterise longitudinal designs;
- explaining the way in which time will be measured and coded e.g. polynomials and
- justify the use of any particular analytical methods and their strengths or weakness for a particular study and
- report relevant effect sizes and indices in order to fully account for the form of change.

There is a need to clearly conceptualise time in the study (Ployhart and Vandenberg, 2010). Most constructs evolve over time and not because of time, meaning time is only a convenient toll or metric to represent change in a longitudinal study (Bollen and Curran, 2006; Singer and Willett, 2003).

Besides time, there is a need to conceptualise the form of change (Ployhart and Vandenberg, 2010). It is important to highlight whether change is expected to be linear or nonlinear (Ployhart and Vandenberg, 2010). In a linear relationship there is a straight light change in variables horizontally, upward positive or downward negative (Ployhart and Vandenberg, 2010). George and Jones (2000) however warn that numerous organisational constructs do not follow a linear progression. Change could be curvilinear, growth followed by plateauing or followed by decline. The exact nature of change in this study was unknown, but expected to be linear and positive.

With regard to change, it is also important to identify the level of change that is going to be analysed, whether group mean changes or whether the study will concern itself with inter-unit changes (Ployhart and Vandenberg, 2010). In considering group mean changes, differences in changes between participants was not analysed, as the focus was on overall change. The difference between group mean change and intra unit change is illustrated in Figures 5.4 and 5.5.

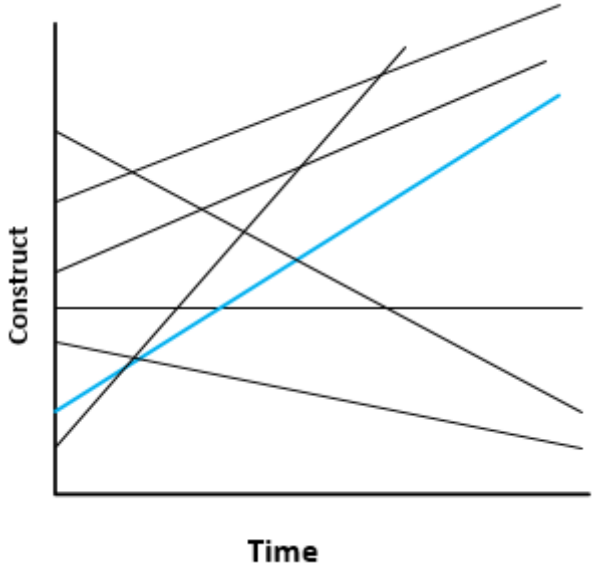
Figure 5.4: Group Mean Changes



Source: Ployhart and Vandenberg (2010:102)

In Figure 5.4. above, the researcher is only tracking the change in the group overall mean for analysis. This is opposed to tracking individual differences between participants as shown in Figure 5.5.

Figure 5.5: Intra-unit differences



Source: Ployhart and Vandenberg (2010:102)

In Figure 5.5 the bold line represents the overall mean changes for the entire group. This study analysed group mean or median changes, as illustrated in both Figures 5.4 and 5.5.

Although encouraging participation is a common occurrence in all research designs, longitudinal studies are a special case, given that members complete the same research instruments multiple times (Wang et al., 2017). There is generally a need to incentivise participation in order to encourage continued participation (Lance et al., 2002). To actively reduce attrition, larger incentives could be planned for later and communicated up front (Martin and Loes, 2010). In light of this incentivising strategy, Wang et al. (2017) recommend starting off with a relatively substantial incentive, reduced to small more frequent incentives for each completion of the research instrument, leading to a more substantial incentive on completion of the final research instrument.

Due to funding limitations, this study did not use financial incentives to encourage participation. However, the SHAPE programme had in-built means to encourage participation in form of a participation certificate issued at the end of the programme. In addition, to improve response rate the research instrument was issued and completed before the start of the training sessions. A participation certificate is deemed to be of considerable value, as participants expect to use it in their efforts to seek employment. A SHAPE certificate will show potential employers that the participant has more skills than just their degree earned from a university. Asking participants to complete the questionnaire before the start of the session gave the participants enough time to complete the questionnaire.

According to Ployhart and Vandenberg (2010), most management science researches are longitudinal in nature but this design is fraught with challenges. These challenges include attrition and the spacing of repeated measurements (Ployhart and Vandenberg, 2010). If the attrition is high, the result may only represent a segment of the sample with common characteristics, which skews the results. If there are too

few repeat measurements, there is a substantial risk of missing the trend (Ployhart and Vandenberg, 2010). This study used three points of measure to ascertain whether or not the trend changed with time. There remained a chance that there were further significant changes in constructs among participants after the certificate ceremony. Any post programme changes, no matter how important, were missed, as they were beyond the scope of this study.

5.3.2.2 Qualitative Designs

The constructivism/interpretivism research paradigm is the basis of a qualitative research design (Tuli, 2011). A qualitative design, according to Punch and Oancea (2014), is not a single entity with clear guidelines from scholars, but rather a collection of various methodological traditions, strategies and designs. It is research based on descriptive data that does not necessarily use statistical procedures (Mackey and Gass, 2015). Despite the clear differences between qualitative and quantitative research methodology, it is common for both methodologies to be used in the same report (Mackey and Gass, 2015). There are 5 main types of qualitative research design, namely ethnography, narrative, phenomenology, grounded theory and case study.

Ethnography

Ethnography has its roots in anthropology, where a researcher immerses himself or herself in the culture of the target population (Lahlou et al., 2015). Similarly, in ethnography the researcher immerses himself or herself in the target population's environment to understand their goals, culture, challenges and motivations (Lahlou et al., 2015; Saura, 2015). The researcher does not have an upfront hypothesis with which to work (Saura, 2015). It uses the subjective experience of the researcher and can be used to describe professional experiences and good and bad practices (Lahlou et al., 2015). Ethnography has proved useful in applied fields and social movements, where researchers wish to understand the broader context in which behaviour occurs (Taylor et al., 2015).

Narrative

The narrative approach pieces together events from a limited number of individuals to make a cohesive story (Saura, 2015). The stories are usually obtained through in-depth interviews or documents, with the researcher searching for themes that provide insight into the broader influences of the stories being narrated (Saura, 2015). Narrative design emanates from the understanding that people are always telling stories about themselves and rejects the notion that there is an absolute truth (Taylor et al., 2015). People usually narrate their own version of reality and if the researcher were to slice up the narrative, the meaning is lost (Taylor et al., 2015). It is also necessary to understand the way in which the story is told (Taylor et al., 2015).

Phenomenology

Phenomenology relies on the subjects of study to provide insight into what is being studied (Saura, 2015). In other words, it is a result of the sober reflection of the lived human experience, free of theoretical, prejudicial and suppositional inclinations (Van Manen, 2007). It is all aimed at the practice of living and pragmatic and ethical concerns (Van Manen, 2007). The research is usually conducted through interviews, reading documents, watching videos or visiting places to gain an in-depth understanding (Saura, 2015). Like other qualitative methods, phenomenology does not begin with a hypothesis. Only after several interviews does the researcher identify recurring themes that can be used on other participants to validate the findings (Saura, 2015).

Grounded theory

The grounded theory approach is a process of discovering concepts, hypotheses and propositions from searching through the data instead of using prior assumptions or an existing theoretical framework (Taylor et al., 2015). In order to develop grounded theory, a researcher can follow one of two approaches. The first approach is to constantly code and analyse data on an ongoing basis to develop concepts (Taylor et al., 2015). The researcher would refine the concepts from what emerges from the coding and analysis (Taylor et al., 2015). The second approach is theoretical sampling, where the researcher selects new cases and compares them against already formed theory (Taylor et al., 2015). This helps to develop the theory (Taylor et al., 2015). Grounded theory can be useful in informing further research design decisions based on its findings (Saura, 2015).

Case study

This is one of the most popular research approaches in most post graduate studies (Rule and John, 2015). Well-conducted case studies can contribute to the application and revision of existing theory and also to the development of new theories (Rule and John, 2015). Although considered qualitative, there are several aspects of case studies that can be viewed through a quantitative lens (Elman et al., 2016). Case studies involve an in-depth understanding of various types of data sources and can be descriptive, explanatory or exploratory (Saura, 2015). A significant challenge of case studies is that they lack consensus among research methodologists (Yazan, 2015).

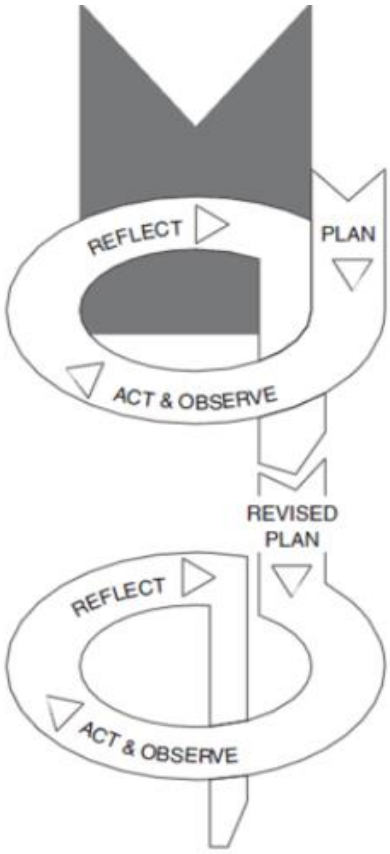
Action Research

Action research is “the study of a social situation carried out by those involved in the situation in order to improve both their practice and the quality of their understanding” (Munn-Giddings and Winter, 2002:8). It is a cyclic process of action and reflection on action (Zuber-Skerritt, 2001). Action research focuses on a problem encountered in practice by practitioners in their own organisational settings and aims to generate, implement and assess an action plan to address the problem (Osterman et al., 2014). Action research assists practitioners in developing their understanding of particular practice-based situations (Wilson, 2016). In light of this, action research is usually termed practitioner research, but

goes beyond that (McAteer, 2013). It theorises and explores practise and provides a basis for critiquing existing ideology (McAteer, 2013). According to Osterman et al. (2014), it is typically a collaborative activity consisting of a research team committed to solving an underlying problem that has been identified.

Townsend (2013) holds that in general, action research involves four stages, namely planning, action, observation and reflection. The most popular model in action research is Kemmis and McTaggart's action research spiral (Townsend, 2013). Its popularity stems from it taking the simple steps in action research and sequencing them according to the way in which they pan out in real action research (Townsend, 2013). Kemmis and McTaggart's action research spiral is depicted in Figure 5.6.

Figure 5.6: Kemmis and McTaggart's Action Research Spiral



Source: Townsend (2013: online)

As can be seen from Figure 5.6, action research goes through a cyclic process of planning, acting, observing and reflecting. The outcome of the preceding cycle influences the activities that take place in the subsequent cycle.

There are various types of action research, namely technical/scientific/collaborative, practical/mutual collaborative/ deliberate and emancipatory/enhancing/critical science (Herr and Anderson, 2014). According to Berg and Fuchs (2013), in the technical/scientific/collaborative mode the goal is to test the efficacy of a specific intervention based on a specific theoretical framework. A practical/mutual collaborative/deliberate mode is when the researcher and practitioner collaborate to identify problems,

to ascertain their underlying causes and decide on possible intervention (Berg and Fuchs, 2013). Lastly, the emancipatory/enhancing/critical science mode of action research has two goals. First, to bring together theoretical and practical knowledge and secondly, to help practitioners understand fundamental problems through social critique.

This research study used Action Research mostly because it is building on other research done before under the SHAPE project in order to improve practice. In addition, since it measures changes in participants' change in ESE due to training, it is spiral in nature, which is a characteristic of Action Research proposed by Kemmis and McTaggart's action research spiral (Townsend, 2013). Specifically, this Action Research is a practical/mutual collaborative/deliberate mode of critical research. The results from this research informed future SHAPE programmes.

According to Dudovskiy (2017), action research can also be classified as positivist, interpretive and critical. Positivist action research is also known as classical action research and views research as a social experiment to test hypotheses in the real world (Dudovskiy, 2017). Interpretive action research, (contemporary action research), views business as a socially constructed reality and focuses on local organisational factors when conducting the research (Dudovskiy, 2017). Critical action research adopts a critical approach to existing processes with the aim of improving them (Dudovskiy, 2017). According to this classification, this research is critical action research, as it assumes, based on past research by various scholars (Mentoor and Friedrich, 2007; Steenekamp, 2013), that current entrepreneurship education in South Africa is ineffective.

Before discussing the specific type of action research that was followed in this research, it would be pragmatic to explore the perceived strengths and weaknesses of action research. The most significant strengths are that it is practical and relevant, can make use of both quantitative and qualitative data and there is a possibility of gaining an in-depth understanding of the problem at hand (Dudovskiy, 2017). The main weaknesses are difficulty in distinguishing between action and research, a lack of rigour and replication of the research and there is always the potential for delays due to the action element (Dudovskiy, 2017).

The following discussion is of the ways in which this research overcame some of the potential weaknesses of action research. According to Dudovskiy (2017), it is difficult to distinguish action from research. This was not much of a challenge in this study, as the researcher focused on data collection and was not involved in setting up the training programme. Neither was the researcher a presenter for the entire programme. The weakness of a lack of rigour highlighted by Dudovskiy (2017) was minimised by following best practices in quantitative research. A pilot study was undertaken before the programme, then data was collected on the first day of the programme, in the middle and at the end of the programme. These data were then analysed, as in any other longitudinal social science study. Dudovskiy (2017) also indicated his concern about potential delays. This research did not experience any delays because the programme under study ran as scheduled.

The specific type of action research methodology used for this study was systemic action learning action research (SALAR). This is a combination of systemic action research and action learning action research. Neither action learning nor action research remain constant, as they are constantly developing from when they emerged in the 1920s and gained prominence during and after World Wars 1 and 2 (Zuber-Skerritt, 2001). Zuber-Skerritt (2001) posits that action learning action research (ALAR) will continue to play a pivotal role in areas such as innovation, leadership, personal learning, organisational learning and creating change. Action learning and action research are similar in that both include active learning, searching, problem solving and systematic inquiry (Zuber-Skerritt, 2001). The difference is that action research is more systematic, more rigorous and verifiable and is always made public (Zuber-Skerritt, 2001). Action learning action research is an off-shoot of a variety of theories, such as grounded theory, personal construct theory, critical theory and systems theory (Zuber-Skerritt, 2001).

Action learning action research is a collaborative process between stakeholders and a researcher, which enables both parties to contribute their diverse knowledge through a dialogical approach to the process, while the researcher at the same time observes and acts upon the dynamics (Coghlan and Brydon-Miller, 2014; Schweikert et al., 2013). It is an integrated concept of enquiry that uses both action learning and action research principles, philosophies and paradigms (Zuber-Skerritt, 2015).

Systemic action research is a term coined by Burns (2007), in which communities and organisations can adapt to their ever changing environments. It raises complex dilemmas between participation in and deep understanding of power and system dynamics (Coghlan and Brydon-Miller, 2014). Systemic action research acknowledges that social and economic problems are a result of complex factors, which when combined, do not always produce the expected outcome dynamics (Coghlan and Brydon-Miller, 2014). To understand the dynamics of change, it is necessary to expose the complex connections that affect the various factors (Burns, 2007).

SALAR is an integrated approach to research premised on people asking fresh questions about known complex systemic problems, individually and collaboratively and critically reflecting on that which is influencing the research subjects' approaches to resolving the identified problems.

In the context of this research, the SHAPE program attempts to up skill students as they prepare to enter the world of employment. The world they are preparing to enter is characterised by high unemployment, as high as 52.2% for their age group (Statistics South Africa, 2016) and economic recession (Statistics South Africa, 2017a).

On the other hand, some research into university entrepreneurship modules indicate no noticeable improvement in important entrepreneurship metrics after taking the course (Mentoor and Friedrich, 2007). All universities are currently assessing entrepreneurship theoretically via assignments and examinations, with limited experiential learning (Radipere, 2012). The government funding formulae for universities encourages the creation of modules that can accommodate large classes, notwithstanding

the need for smaller classes necessary for effective entrepreneurship training (Mentoor and Friedrich, 2007; Davies, 2001). In short, the research investigated transformative learning in an environment characterised by liquid modernity (Elliott, 2013).

5.3.2.3 Mixed methods designs

The mixed methods methodology combines elements of both quantitative and qualitative research approaches. According to Denzin and Lincoln (2011), the mixed methods design stems from paradigm debate between qualitative and quantitative methodologies and assumes a pragmatic approach, which holds that these two approaches are compatible and not mutually exclusive. Creswell (2013) provides the following characteristics of mixed research:

- it involves the use of both qualitative (open ended) and quantitative (close ended) data and includes the analysis of both types;
- data collection for both qualitative and quantitative approaches needs to be accomplished with adequate rigour and
- the two types of data are integrated to produce a more holistic view.

Having discussed various research designs, it is important to note that there is no perfect research method, as there are always trade-offs the researcher has to take into account (Mackey and Gass, 2015).

5.4 RESEARCH METHODOLOGY

Research methodology is a systematic way of finding out and solving the problems being studied in the research (Babbie, 2016; Kumar, 2008). In other words, methodology is concerned with the various steps adopted by the researcher to study the research problem, including the logic behind those steps (Kumar, 2008). Pursuant to this, this section discusses sampling strategies, the sample, data collection methods, data analysis and the study site.

5.4.1 Sampling Strategies

Selecting an appropriate sample strategy is critical in any research study, as it is generally impractical to study the whole population (Marshall, 1996). The choice of strategy depends on the aim of the study and the desire to generalise to the entire population (Marshall, 1996). There are generally two types of sampling strategies, namely probability and non-probability strategies (Van der Westhuizen, 2016; Denscombe, 2014). In a probability strategy such as simple random sampling, every element has a known and equal chance of being selected (Sekaran and Bougie, 2010; Van der Westhuizen, 2016; Denscombe, 2014). When a simple random sampling strategy is selected, bias is minimised and the greatest chance for generalisability is offered (Sekaran and Bougie, 2010). The main drawback of simple random sampling is that it is expensive to conduct (Sekaran and Bougie, 2010). It is also difficult to

obtain an up to date sampling frame from which to generate the random sample. Other more complex probability sampling approaches include systematic sampling, stratified random sampling, cluster sampling and double sampling. These complex random sampling strategies will not be discussed further, as this research utilised a non-probability sampling approach.

A non-probability sampling strategy was selected because of the nature of the research being conducted. For a truly random sample to be selected, the characteristics of the entire population about the research matter must be known (Marshall, 1996) and have an equal chance of being selected (Sekaran and Bougie, 2010). This was not possible with this study as it is an action research investigating a group of participants who responded to an advertisement for the SHAPE programme. By responding to the advertisement, these students self-selected, which might mean they are dissimilar to those students who maybe saw the advertisement and chose not to respond.

There is also a reality that there are respondents who saw the advertisement and were interested but due to time constrains could not attend the SHAPE programme. Other respondents who could have been interested in the programme perhaps did not see the poster, for whatever reason. This is to illustrate that the study could not cover the entire potential population. The above specified realities limited the potential choice of sampling strategy to non-probability sampling. The weaknesses of such non-probability sampling are discussed briefly next.

In a non-probability sampling strategy, elements of the study do not all have an equal chance of being selected (Sekaran and Bougie, 2010). Using a non-probability sample means the generalizability of the results is limited (Sekaran and Bougie, 2010; Denscombe, 2014).

Non probability sampling includes convenience sampling, purposive sampling, judgement sampling, quota sampling (Sekaran and Bougie, 2010) and self-selection sampling. The study used non-probability, self-selection sampling. A self-selection sampling approach is when the respondents choose whether or not to participate in a research, for example, by responding to a questionnaire online. This research used self-selecting sampling because at the onset respondents chose to attend the SHAPE programme, they then chose to attend the particular training session where the research instrument was distributed and also chose voluntarily to complete the questionnaire that was provided. Only in the last round of data collection did the researcher encourage those participants who has not completed, to complete the third questionnaire. Follow ups were was done through email and telephonic follow-ups.

Collecting data from one university was deemed adequate for this study because of the research design and goals of the study. Babbie (2011) argues that representativeness is only concerned with those characteristics relevant in the study. The study aimed to evaluate student transformation after entrepreneurship training and to propose a model for transformative learning that can be applied to develop elements of ESE. This was effectively done using a longitudinal study of one training programme. Using one training program meant that any change experienced could reasonably be

attributed to treatment through the specific training. The SHAPE programme was only being run at one university and evaluating more than one training program was beyond the scope of the study.

5.4.2 Sample

The question of sample size is pertinent in all types of research (Hill, 1998). Sample size and sample design are vitally important for establishing a representative sample that can reasonably be generalised to the entire population (Sekaran and Bougie, 2010). Unless the sample size is appropriate for the level of generalizability required, a complex research design will not achieve the desired research objectives (Sekaran and Bougie, 2010). Calculating the sample size, to a large extent, depends on the size of the population in question (Hill, 1998).

Marshall et al. (2013) hold that there are three ways of determining sample size. The first being citing recommendations by relevant methodologists (Marshall et al., 2013). Secondly, a sample size could be justified by citing the sample sizes used in similar studies (Marshall et al., 2013). Lastly, the sample size could be determined through a statistical calculation within a dataset (Marshall et al., 2013). In this study the researcher chose citing recommendations from relevant methodologies to justify the sample size.

There is no clear indication on how large a sample size should be (Cohen et al., 2013). The size of the sample depends on a number of factors, which include the purpose of the study, the nature of the population being studied, the level of accuracy required, the expected response rate, the number of variables being studied and whether the research is qualitative or quantitative (Cohen et al., 2013).

It should be noted that there needs to be a minimum of 30 participants per variable being studied if any form of statistical analysis will be used (Cohen et al., 2013). This study had every variable covered by at least 30 respondents. Potential variability among the variables being studied also drives the size of the sample; greater variability calls for a larger sample (Cohen et al., 2013). The minimum sample size for this study was determined to be a minimum of 60 participants. It was anticipated that variability between variables would be minimal, as the vast majority of the participants were students who responded to a SHAPE program advertisement.

Despite sampling size recommendation, the reality of longitudinal studies is that they are subject to attrition (Martin and Loes, 2010). The specific strategies pursued to reduce attrition are discussed in section 5.2.2 above.

5.4.3 Target Population

The target population for this study was third year students at the University of KwaZulu Natal, Westville Campus, enrolled in a three or four-year degree. There are approximately 2,000 third year students who fit these criteria. Third year students were selected because they have completed a significant portion of their field of study and, in theory, are more aware of their career options. More

specifically, the target population was students interested in entrepreneurship and who responded to an advertisement for the SHAPE programme that was placed in strategic places around the Westville campus.

5.4.4 Sample Size

This research used a sample generated from participants in the SHAPE programme. These were mostly students enrolled in their third year, or higher, of their studies in various disciplines, mostly based at the Westville campus of the University of KwaZulu-Natal. The number of respondents varied significantly from one questionnaire distribution to another during the longitudinal study. For instance, in week 1 of the study (Round 1), a total of 138 respondents completed the questionnaire and this increased to 144 in week 7 (Round 2), reducing to 126 in week 13 (Round 3).

For hypothesis testing, the study was interested in those participants who completed the questionnaire for all three rounds of data collection. Sixty respondents fit the criteria. Ethically, the researcher exhausted all methods to increase the number of respondents, (who completed the questionnaire in all three rounds), after numerous personal interactions initiated by the researcher with the respondents.

5.4.5 Data Collection Methods

Data collection in any study should be envisaged and planned beforehand after careful consideration of the nature of the data being sought (Ritchie et al., 2013). Numerous techniques could have been used to collect data for this study and all were considered. These included interviews, observations, case studies, surveys and questionnaires and the latter was chosen. The same questionnaire was issued to participants in sessions 1 and 7 and the last session of the SHAPE training programme.

The questionnaire was selected because of the longitudinal nature of the study. A questionnaire could be replicated exactly between data collection sessions. According to Phillips and Stawarski (2016), questionnaires are the most common data collection instrument because of their versatility. They are usually used to capture attitudes, beliefs and opinions (Phillips and Stawarski, 2016). Layout is important when designing a questionnaire, as it could influence the responses and also the accuracy of data capturing (Brace, 2008). This research used a relatively simple layout (refer to Annexure 1).

Questions on a questionnaire can be classified in a number of ways i.e. open or closed questions, spontaneous or prompted, open ended or pre-coded questions (Brace, 2008). This study mostly used closed questions that were pre-coded. Only 2 questions were open ended in order to allow respondents to elaborate on some of their responses. As most of the questions were closed, they were prompted, in line with the classification by Brace (2008).

A five point Likert scale was used for the answers. Scaled responses are known for two main weaknesses, namely people generally tend to provide positive responses, even when their behaviour

indicates a different attitude (Babbie, 2016). Secondly, a researcher cannot ascertain the reasoning behind the response that was selected (Gillham, 2008).

The response options can be balanced or unbalanced (Brace, 2008). In a balanced scale there are an equal number of positive and negative responses. If more positive or negative responses are provided, the positive or negative responses will dominate, depending on which side is favoured (Brace, 2008). In this research, a balanced five point Likert scale was used. The third option, as far as possible, was neutral, and a "not-applicable" response was not provided.

One substantial challenge associated with questionnaires is the low response rate (Moore, 2006). To improve response rates, the questionnaire was handed out to respondents who enrolled for the SHAPE training session. They were given some time to complete and return the questionnaire during the session. This technique worked reasonably well for all three sessions that required the completion of a questionnaire. However, for the final round, despite having the highest attendance of more than 160 people, only 103 participants completed the questionnaire. Of the 103 respondents, only 33 had completed both Round 1 and Round 2 questionnaires. In order to improve the response rate of qualifying respondents, the researcher followed up with the 27 qualifying respondents who had not completed the questionnaire.

5.4.6 Study Site

A study site is setting which can be physical, social and/ or cultural, in which the researcher undertakes his study (Given, 2008). The study site was the University of KwaZulu-Natal Westville Campus in the School of Management, which is part of the College of Law and Management. The SHAPE programme was run in lecture theatres, mostly different lecture theatres at the Westville campus every week, depending on the venue availability.

5.5 DATA QUALITY CONTROL

The challenge in participant measurement is that many of the constructs the researcher is attempting to measure are buried within the subjects (Ortlieb, 2017). Measurement also depends on transforming those states that are inside a person into something other people can see and understand (Ortlieb, 2017). It should also be born in mind that measuring influences the results one is attempting to measure (Ortlieb, 2017). In order to improve the quality of data in research, one needs to test the reliability and validity thereof. These concepts are discussed below.

5.5.1 Reliability of Instruments

Reliability measures true scores, including checking the stability and equivalence (De von et al., 2007). Reliability is the ability of an instrument to measure an attribute consistently (De von et al., 2007; Siegle, 2013). There are three types of reliability, namely test-retest, equivalent form and internal consistency

reliability (Siegle, 2013). Test-retest reliability means an instrument measures constructs consistently from one occasion to the next (Siegle, 2013). For this research, the same questionnaire was used for all three rounds. Equivalent form reliability attempts to measure consistency between two versions of an instrument (Siegle, 2013). Internal consistency refers to the instrument's homogeneity, that is, the degree to which two or more items on the instrument measure the same construct (Henson, 2001).

According to Osburn (2000), despite the prevalence of equivalent form estimators, they are appropriate in limited circumstances, where two different tests measuring the same constructs are available. This study was not concerned with equivalent form reliability, as it was irrelevant. Despite efforts to improve test-retest validity, Osburn (2000) asserts that test-retest coefficients are also problematic in paper-and-pencil tests due to the practice and memory effect.

Internal consistency is measured by Cronbach's alpha, which is also known as the coefficient alpha (Kline, 2011; Hair et al, 2014; Osburn, 2000). A Cronbach's alpha of 0.00 means there is no consistency, while 1.00 means perfect consistency. The Cronbach's alpha is computed thus:

$$\alpha = (k/(k-1)\ X[1 - \Sigma\ (S^2 1)/S^2_{sum})$$

Cronbach's alpha should be determined before the instrument is used, to ensure the instrument in question is consistent (Tavakol and Dennick, 2011). In line with this, a pilot study was undertaken in which the Cronbach's alpha was calculated for all questions. In addition, composite scores of Cronbach's alpha were calculated per section that tested elements of transformative factors i.e. disorienting dilemma, critical reflection, reflective discourse, action and personal factors. The Cronbach's alpha should be more than 0.7 to ensure good reliability (Rockinson-Szapkiw, 2017). The Cronbach's alpha for the composite scores for each section of the questionnaire was calculated and it was found to be either above 0.7 or close to 0.7. Field (2013) makes a concession that in social science a Cronbach's alpha below 0.7 but above 0.5 can be accepted as reliable for questionnaires designed to measure attitudes. This leads to a discussion on the way in which validity was ensured in this research.

5.5.2 Validity of Instruments

Validity is defined by De von et al. (2007) as the ability of a research instrument to measure the attributes of a construct that is being studied. There are three types of validity, namely content, predictive or concurrent and construct validity (Rockinson-Szapkiw, 2017). Content validity answers the question, do the selected items measure the content they were intended to measure (Rockinson-Szapkiw, 2017)? Predictive validity aims to find out if the results correlate with other results (Rockinson-Szapkiw, 2017). Construct validity measures the extent to which an instrument measures the relevant construct being studied (Kazdin, 2007).

To improve content validity, there is usually the need to consult a panel of experts (Rockinson-Szapkiw, 2017). In this research, there was reference to past research conducted on similar constructs. To improve

predictive validity, the results of this research were compared to research results from other entrepreneurship courses in South African universities, such as research by Mentoor and Friedrich (2007). The calculation of correlations was also used to improve predictive validity. Construct validity is usually established using either factor analysis or principal component analysis, done through published validation studies (Rockinson-Szapkiw, 2017). Construct validity can be improved by using multiple measurements (Rockinson-Szapkiw, 2017). As this study utilised a new research instrument, no validation studies were performed on the instrument to improve construct validity. In this study, each construct of interest was measured using multiple questions.

There are three important elements of validity, namely construct validity, psychometric characteristics and measurement sensitivity (Kazdin, 2007). Construct validity was discussed in the preceding paragraph. Psychometric characteristics means checking whether a measure and its content assesses the construct of interest (Kazdin, 2007). Measurement sensitivity is about the measure being able to identify change in either direction i.e. increasing or decreasing (Kazdin, 2007). The pilot study was conducted in this research to assess the psychometric characteristics of the research instrument and measurement sensitivity. The results were satisfactory, as they loaded reasonably well to the factors of interest and the questionnaire was adopted without any fundamental change in content.

5.6 DATA ANALYSIS

Data were captured from the questionnaires to a spreadsheet as soon as each round of data collection was completed. This was meant to minimise the chances of losing questionnaires due to the passage of time. The researcher hired assistants experienced in data capturing and performed quality checks of the captured data afterwards. When all the data were captured, it was cleaned by assigning a unique identity to each respondent and codes to the open ended questions.

The data analysis commenced by analysing the demographic information of the respondents for every round of the longitudinal study. The demographic elements that were studied included gender, age, race and whether or not the respondent was a student. Simple percentages and frequencies were used, including tables and bar graphs. Analysing demographic information assists in highlighting the important elements on which to focus.

In this study gender was deemed important for further analysis due to the prescription by Botha (2014), who stated that any study of entrepreneurship in South Africa should include an analysis of gender. The gender distribution in the sample was consistent with the overall university student population gender distribution for 2015 (Council of Higher Education, 2017). The 20-25 year age group was clearly over-represented, as well as black people and students. These over-represented factors were therefore excluded from further analysis.

The next step in the data analysis was to perform a question by question analysis. A brief discussion of the question, that is, what the questionnaire intended to measure, is followed by a presentation of the results in tabular form with an accompanying bar graph. These results are discussed briefly thereafter.

After all the questions had been analysed in this way, reliability statistics were computed for each factor, that is, disorienting dilemma, critical reflection, reflective discourse, action and personal factors. Cronbach's alpha was also computed for each factor. The evaluation followed the rule of thumb provided by George and Mallery (2003), which is described in section 7.4.

From the factor analysis, the items loaded very well to the factors and the test of normality followed. The test of normality is meant to provide a guide for the selection of appropriate tests to be used for further analysis (Saculinggan and Amor Balase, 2013). The tests used in this study were the Kolmogorov-Smirnov (KS) and Shapiro Wilk (W), both of which revealed that the data were significantly skewed, which confined further analysis to non-parametric tests.

Thereafter, confirmatory factor analysis (CFA) was conducted for the three (3) rounds of the study. In CFA the first step was to run KMO and Bartlett's tests (Hair et al, 2014). This was followed by assessing the communalities and total variance explained the tables. Finally, a rotated component matrix was generated in order to ascertain how the items loaded to factors. Rotating the component matrix is to simplify presentation (Chetty and Datt, 2015) and make it more readable. Items loaded well to factors, with reasonably good loading, mostly above 0.70.

The next step was the Mann Whitney test to compare scores by gender. The Mann Whitney test was used instead of ANOVA because the data was skewed and it was also categorical. Then finally, hypothesis testing.

Sub scores per factor were extracted, now only for participants who had participated in all three rounds. This yielded 60 scores, which, based on another test of normality, proved to be relatively normally distributed. This means the ANOVA was used for testing the hypothesis.

The first step in testing the hypothesis was to conduct multivariate tests for each factor. Wilk's Lambda was preferred for further analysis. After multivariate tests, Mauchly's Test of Sphericity was extracted. Where the assumption of sphericity was not violated, within subjects effect tests were conducted. This was followed by profile plots per factor. The significance of the changes were examined using the Bonferroni post hoc test (Grande, 2016).

5.7 ETHICAL CONSIDERATIONS

The researcher applied for ethical clearance to conduct the study from the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal on the 11th of July 2017 and approval was granted on the 14th of July 2017 (see Annexure 13).

Each questionnaire that was distributed had a letter attached as the first page highlighting that participation in the study was voluntary and that the participants had the right to withdraw from the study at any time (see Annexure 1). Confidentiality was promised and during the analysis stage, only the student number or identity number was used to ensure that it was the same student. No names of respondents were identified in the research results.

After capturing the data, the questionnaires were kept in the supervisor's office in a locked cabinet. After the data analysis had been completed, the questionnaires were then transferred to the relevant place prescribed by the University.

Notwithstanding the ethical issues covered by the above consideration, Nolen and Putten (2007) highlight areas that require consideration, specifically with regard to action research. With action research there is a potential for conflict between teaching and research and the researcher must ascertain to what extent students can provide informed consent (Nolen and Putten, 2007). In this particular study, although the researcher was not teaching, the researcher's supervisor was running the SHAPE programme. It is the researcher's considered opinion that the participants/students felt relatively free to either participate or decline participation. This is mostly because these were university students and not minors and freedom of choice was proved when a number of participants chose not to complete the last round of data collection. Although more than 160 participants were handed questionnaires, only 103 initially returned completed questionnaires.

Another ethical consideration peculiar to action research is to do with protecting the confidentiality of the participants. According to Nolen and Putten (2007), confidentiality could be broken at the points of data collection, processing, storage and dissemination. This confidentiality is usually broken when data is distributed within an organisational environment (Nolen and Putten, 2007). The researcher only disseminated the final thesis within the school. Only the supervisor and one other student involved in the research had access to the raw data that was collected.

Students who participated in the research could be affected by an existing relationship problem with the researcher teacher in action research (Nolen and Putten, 2007). This arises when the student feels that a refusal to participate could jeopardise a future relationship with the teacher researcher. This was not a significant risk in this research, given that the researcher was not a teacher of any of the participants. In addition, the supervisor conducted SHAPE as a voluntary program. If a student had a negative relationship with the supervisor, he or she would not have registered for the programme.

5.8 LIMITATIONS OF THE STUDY

This research utilised non-probability sampling techniques. Non-probabilistic sampling suffers from limited generalisability and there are a limited number of statistical analysis methods that can be used to analyse the data (Asthana and Braj, 2016).

Due to limited funding, the number of participants were limited to students at the University of KwaZulu-Natal. This limited the results from being generalizable to all entrepreneurship university students countrywide.

The research relied on self-reports to a large extent. These were self-reports in the form of completed questionnaires. Spector (1994) holds that answers to sensitive questions provided in self-reports are unduly influenced by social desirability. It is accepted that this bias cannot be entirely eliminated from the research. There is significant evidence indicating that self-reports are also affected by issues such as attitude, cognitive processes, mood and personality (Spector, 1994). To reduce the limitation of over-reliance on self-reports, the research also used objective information provided by the research instrument, such as age, gender etc.

Another potential limitation was to do with task exhaustion. That is when people get tired of participating in the research (Bennett, 2004). The last round of the study had the lowest response rate despite having the highest attendance. This implies that the participants who responded after the last round could have been more motivated than those who ignored the questionnaire they received. This could mean that the results were slightly positively skewed.

Action research can be used to manipulate people to agree with a particular point of view (Bennett, 2004). Even without an overt request for people to agree, it is possible that participants may have realised the need to show change, especially after participating in a 13-week programme aimed at improving their entrepreneurial skills and attitudes.

5.9 THE SHAPE PROGRAM

The SHAPE programme was a 13 session program that began on the 18th of July, 2017. Each session lasted for 2 hours. Posters were displayed at various places around the UKZN Westville Campus advertising the programme. The SHAPE programme was free of charge. The programme was mostly conducted in a lecture style with presentations by experts and entrepreneurs from various relevant fields. The SHAPE programme is a social technology research tool to enhance entrepreneurship training. The sessions are summarised in Table 5.1 below.

Table 5.1: Summary of the SHAPE programme

Session	Date	Topic
1	18 July 2017	SHAPE OPENING/ INTRODUCTION **First Round:** Questionnaire completion.
2	25 July 2017	**Topic**: The WHY of doing Business: An inward journey on business passions/purpose. Approximately 100 minutes including activities. **Facilitators**: Bianca Rohan and Sarah Shuttleworth

Session	Date	Topic
~~3~~	1 Aug 2017	**Topic**: Creativity, Innovation & Entrepreneurship. **Summary**: Be creative, do things others refuse to do. No compromise between dreams and capabilities. **Facilitator**: Rene Botha
~~4~~	8 Aug 2017	**Topic**: My Fit In South Africa's Economic Development Sectors. **Summary**: A look at the different economic sectors in our country and a discussion of which would be attractive to do business in. **Facilitator**: Mr Russel Curtis, HOD at Durban Investment Promotion, eThekwini Municipality
5	15 Aug 2017	**Topic**: Personal and Product Innovation. **Summary**: Exploration of possible new business teams and business ideas. **Facilitator**: Dr Shamim Bodhanya
6	22 Aug 2017	**Topic**: Forming Like Minded, Like Hearted and Like Willed Business Friends. **Summary**: Exploration of possible new business teams and business ideas. **Facilitator**: Dr Thea van der Westhuizen, Lecturer at UKZN
7	29 Aug 2017	**Topic**: Business Model Canvas: Central Business Concept. **Summary**: (a) How to develop your brand, b) what makes your business stand out and c) what separates successful businesses. **Facilitator**: Ms Mbali Bhengu, Managing Director of Mindswitch **Second Round:** Questionnaire completion.
8	5 Sept 2017	**Topic**: Business Model Canvas: Value chain and markers. **Summary**: Exploration of how to build a Business Model canvas. **Facilitator**: Ms Mbali Bhengu, Managing Director of Mindswitch
9	12 Sept 2017	Independent Group Work (work in your teams outside the classroom). Participants were asked to discuss their business concepts in their groups.
10	26 Sept 2017	**Topic**: Business Model Canvas: Financials. **Facilitator**: Mr. David Gould, Managing Director of Vulindlela Underwriting Managers
11	3 Oct 2017	**Topic**: Business Model Canvas: Business resources. **Facilitator**: Bradley Porter, owner of Flexible Workspace
12	10 Oct 2017	**Topic**: Prototype/preparing for business exhibiting. **Facilitator**: Mr. Chris Du Toit
13	24 Oct 2017	• Exhibition of participants' businesses. • Final questionnaire completion. • CERTIFICATE PRESENTATION

5.10 PILOT STUDY

The purpose of the pilot study was to prepare for the main study, that is, to ensure that the questions were clear and unbiased. Another purpose was to test the reliability of the questions and to measure the

constructs of interest. Twenty (20) respondents from the UKZN Westville Campus completed the pilot study, as the SHAPE program was advertised to students mostly at the Westville Campus. The data from the pilot study is excluded from the final data analysed. The results from the pilot study were first evaluated statistically and it was found that most of the questions were clear and unbiased. Cronbach's alpha was then used to make an inclusion or exclusion decision, based on the rule of the thumb provided by George and Mallery (2003).

5.10.1 Pilot Study: Success criteria

It is always important to define the success criteria of a pilot study before commencing with it (Thabane et al., 2010). This provides a guideline for the way in which the results of the pilot study will be interpreted as well as any decisions that could arise from the pilot study (Thabane et al., 2010).

The key purpose of this pilot study was to validate the questionnaire. There were two main elements that were being validated in this pilot. Firstly, whether the questions could be clearly understood by potential respondents of interest and secondly, the pilot study evaluated the reliability of the questions using Cronbach's alpha (Hair et al, 2014). The pilot study design, sample size and the way in which data were gathered is discussed next.

5.10.2 Pilot study design, sample size and data gathering

Central to the pilot study was the need to identify any unforeseen problems (Viechtbauer et al., 2015). With this in mind, the pilot study was designed to test the effectiveness of the questionnaire that was applied to a target group similar to the sample who would take part in the actual research. This was in line with a prescription by Thabane et al. (2010), who argued that the pilot participants must have similar characteristics to the population of interest.

With the help of two Masters students, a convenience sample was used to collect pilot study data. A convenience sample is only unacceptable if the final population to be studied is different from the sample (Johanson and Brooks, 2010). Students who were in their third year at the University of KwaZulu Natal, Westville campus were targeted. This was because the targeted audience of the study was also 3rd and 4th year students who were likely to respond to the SHAPE advertisement, which was posted at different venues within the Westville Campus.

In two (2) days, 20 students fitting the required criteria were found and they completed the questionnaire. This was more than the 12 participants recommended by Julious (2005). According to Julious (2005), a sample size of 12 members or more provides more precision around the mean and variance for the preliminary analysis.

5.10.3 Pilot study sample make up

The responses to the pilot study were first captured into an Excel spreadsheet by the researcher. The demographic information of the respondents is summarised below.

5.10.3.1 Age of pilot study respondents

Age is a useful factor of analysis, especially in entrepreneurship research. As discussed in section 2.8.4, entrepreneurship tends to be favoured more by people between the ages of 25 and 55 (Herrington et al., 2017). Zhao et al. (2015) holds that there is a U-shaped relationship between entrepreneurs' age and entrepreneurial success. Table 5.2 indicates the age distribution of the pilot study respondents.

Table 5.2: Age Distribution of the Pilot Sample

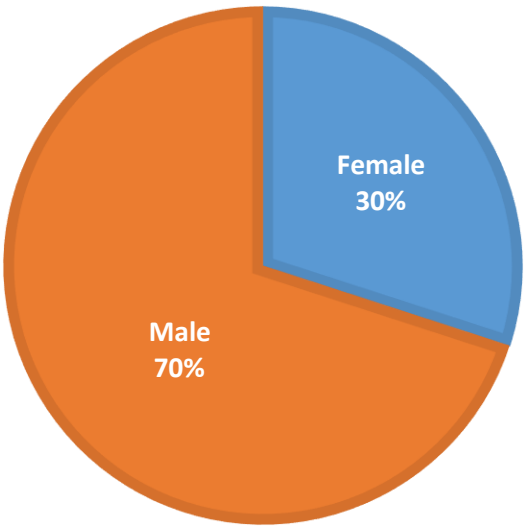
Age in Years	Number of people	% of total
Under 20 years	4	20.0%
20-25 years	7	35.0%
25- 30 years	5	25.0%
Over 30 years	0	0.0%
No age given	4	20.0%
Total	**20**	**100.0%**

From the table above, it is clear that more that 55% of the respondents were under the age of 25 and 20% of those were younger that the age of 20. The majority of respondents were between the ages of 20 and 25.

5.10.3.2 Gender composition of pilot study respondents

Gender is a key factor in entrepreneurship research. As discussed in section 2.8.3 males are more likely to be entrepreneurial than females due to the magnitude of the challenges that females face in becoming entrepreneurs. According to Herrington et al. (2017), in South Africa there has been a significant increase in female opportunity-driven entrepreneurs since 2001. Figure 5.7 illustrates the gender distribution of the respondents in the pilot study.

Figure 5.7: Gender Composition of Pilot Study Participants

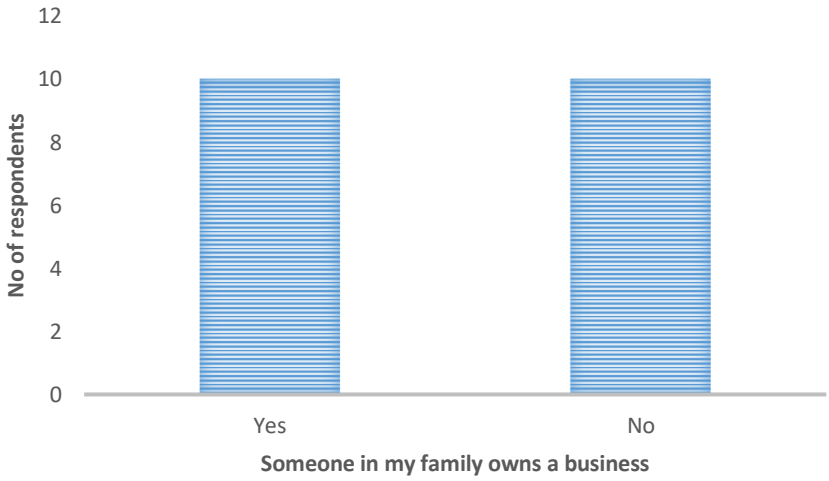


Of the pilot study sample, 70% were male. This gender distribution differs from the average South African universities' gender distribution according to the Council of Higher Education (2017). This discrepancy was not found in the final data.

5.10.3.3 Respondents with a family member who owns a business

Another key factor in entrepreneurial self-efficacy is whether or not a person grew up in an environment where a family member owned a business. It is widely agreed in entrepreneurship literature that growing up in an entrepreneurial family increases an individual's entrepreneurial potential (Davoudi, 2017; Hout and Rosen, 1999; Mathews and Moser, 1995). Parents or guardians are important role models for their children and they impart the relevant entrepreneurial attitudes and behaviours (Chlosta et al., 2012; Hout and Rosen, 1999). Figure 5.8 depicts the number of respondents who indicated that a family member had a business.

Figure 5.8: Pilot study respondents with a family member who owns a business



Half of the pilot study respondents had a family member who owned a business. This was a surprising result, as it contradicts the national statistics, which reflect an ownership rate of only 2.5% (Global Entrepreneurship Monitor, 2017). This question was left in the questionnaire with the expectation that with a larger sample the responses would normalise.

5.10.4 Pilot study's statistical analyses - frequency tables

5.10.4.1 Important experiences (disorienting dilemma)

Disorienting dilemma was evaluated using 5 questions and the following results emanated from the pilot study responses (to the 4 closed questions).

Table 5.3: Disorienting Dilemma Responses - frequency table

#	**I have had important experiences (practical/ emotional/ life changing) in the past which can help me:**	*No extent*		*Limited extent*		*Neutral*		*Moderate*		*Great extent*		**Total**
		#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	
1	identify opportunities to start a business	0	0.0%	3	15%	7	35%	7	35%	3	15%	**20**
2	develop relationships with people necessary for business success	0	0.0%	1	5%	3	15%	12	60%	4	20%	**20**
3	manage my own business	0	0.0%	3	15%	8	40%	7	35%	2	10%	**20**
4	work under pressure, stress and constant change experienced if I own a business	2	10.0%	2	10%	2	10%	10	50%	4	20%	**20**

From the table above it can be seen that all the respondents provided a response to every disorienting dilemma question. Of concern was the high number of neutral responses to the question about "managing my own business" (question 3; 40%) and "identify opportunities to start a business" (question 4; 35%). The two questions were left unchanged as it was felt that people understood the question but may have been unwilling to commit to a direction. As it is a longitudinal study, it was anticipated that with treatment (via SHAPE), neutral responses could become either more positive or negative.

5.10.4.2 Critical Reflection

Critical reflection was evaluated using 5 questions, four of which are presented in Table 5.4.

Table 5.4: Critical Reflection Responses - Frequency Table

#	I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me	*No extent*		*Limited extent*		*Neutral*		*Moderate*		*Great extent*		Total
		#	%	#	%	#	%	#	%	#	%	
6	identify opportunities to start a business	1	5.0%	7	35.0%	4	20.0%	8	40.0%	0	0.0%	**20**
5	develop relationships with people necessary for business success	1	5.0%	4	20%	4	20%	10	50%	1	5%	**20**
7	manage my own business	1	5.0%	4	20%	5	25%	8	40%	2	10%	**20**
8	work under pressure, stress and constant change experienced if I own a business	3	15.0%	6	30%	3	15%	7	35%	1	5%	**20**

From the table above it can be seen that all the respondents provided a response to every disorienting dilemma question. There is also a wide distribution of responses, from very negative to positive. Based on statistical analyses, the questions were deemed to be clear and capable of eliciting either positive or negative responses.

5.10.4.3 Reflective Discourse

Statistical analysis was performed for reflective discourse. According to Mezirow (2000b), reflective discourse is used to evaluate available evidence either supporting or contradicting a position and critically evaluating the alternatives. Reflective discourse was evaluated using 4 questions, the responses of which are presented in Table 5.5.

Table 5.5: Reflective Discourse Responses - Frequency Table

#	I have recently had an in depth discussion with someone in which I questioned the way I think about how I can:	No extent		Limited extent		Neutral		Moderate		Great extent		Total
		#	%	#	%	#	%	#	%	#	%	
11	identify opportunities to start a business	1	5.0%	5	25.0%	3	15.0%	10	50.0%	1	5.0%	20
12	find a market or geographic territory for a product or service of choice	1	5.0%	5	25%	4	20%	8	40%	2	10%	20
13	manage my own business	0	0.0%	2	10%	5	25%	10	50%	3	15%	20
14	my ability to work under pressure, stress and constant change experienced if I own a business	0	0.0%	7	35%	4	20%	6	30%	3	15%	20

From the table above it can be seen that all the respondents provided a response to every question regarding reflective discourse. There was a wide distribution of responses from very negative to positive.

Based on statistical analyses, the questions were deemed to be unbiased and capable of eliciting either positive or negative responses in the main study.

5.10.4.4 Action

In entrepreneurship statistics, action, as measured by TEA, is critical. The highest level of transformative learning is an individual who thinks critically about his present conditions and points of view and decides to take action to change (Kitchenham, 2008). Action was evaluated using 4 questions, the responses of which are presented in Table 5.6.

Table 5.6: Action Responses - Frequency Table

#	I act in a way which can help me:	No extent		Limited extent		Neutral		Moderate		Great extent		Total
		#	%	#	%	#	%	#	%	#	%	
15	**identify opportunities to start a business**	**0**	**0.0%**	**4**	**20.0%**	**2**	**10.0%**	**10**	**50.0%**	**4**	**20.0%**	**20**
16	find a market or geographic territory for a product or service of choice	0	0.0%	3	15%	7	35%	8	40%	2	10%	20
17	manage my own business	0	0.0%	5	25%	2	10%	8	40%	5	25%	20
18	my ability to work under pressure, stress and constant change experienced if I own a business	0	0.0%	3	15%	3	15%	8	40%	6	30%	20

From the table above it can be seen that all the respondents provided a response to every question regarding reflective discourse. This section received relatively more positive responses and no extreme negative responses. There was a slight concern with regard to the significant number of neutral responses to question 16 but no change was made, as it was assumed that the participants in the main study will make a positive or negative response once they have completed the SHAPE program.

5.10.4.5 Personal factors, background and distortions

In addition to exploring factors directly linked to transformative learning and ESE, the questionnaire also aimed to find out about several attitudes towards entrepreneurship. This included opinions about their own upbringing, religion, family, government and other factors. Table 5.7 presents a summary of the way in which the pilot study participants responded.

Table 5.7: Personal factors - frequency table

#		*No extent*		*Limited extent*		*Neutral*		*Moderate*		*Great extent*		**Total**
		#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	
19	I think experts in the country are supportive of starting new businesses	1	5.0%	3	15.0%	5	25.0%	9	45.0%	2	10.0%	**20**
20	I think government policies are supportive of starting your own business	0	0.0%	4	20%	6	30%	8	40%	2	10%	**20**
21	My culture and community are supportive of starting your own business	2	10.0%	5	25%	3	15%	7	35%	3	15%	**20**
22	My religion is supportive of starting your own business	1	5.0%	1	5%	7	35%	6	30%	5	25%	**20**
23	The TV, internet and media are supportive of people in business and those who start own businesses	0	0.0%	3	15%	4	20%	6	30%	7	35%	**20**
24	My family will support me if I start my own business	0	0.0%	2	10%	4	20%	8	40%	6	30%	**20**
25	I'm the right age to be in business or start my own business	1	5.0%	3	15%	2	10%	7	35%	7	35%	**20**
26	I have the right life experiences to start my own business	1	5.0%	4	20%	2	10%	7	35%	6	30%	**20**
27	I admire people who start or own their own business	0	0.0%	4	20%	2	10%	5	25%	9	45%	**20**
28	I believe entrepreneurs are born with the relevant traits to start or own a business	1	5.0%	5	25%	3	15%	7	35%	4	20%	**20**
29	I believe anybody can become a successful entrepreneur	4	20.0%	3	15%	4	20%	5	25%	4	20%	**20**

The above table shows that all the respondents provided a response to every reflective discourse question. There was a wide distribution of responses from very negative to positive. Based on statistical analyses, the questions were deemed unbiased and capable of eliciting either positive or negative responses in the main study. However, there was a significant number of neutral responses to question 22, "My religion is supportive of starting your own business". However, the question was not changed, as it was felt that it is a fair outcome if a religion neither encourages nor discourages business activities.

5.10.5 Pilot Study's Reliability Statistics

The Cronbach's alpha was calculated for the pilot study results before the instrument was used in the main study to ensure that the instrument in question was reliable (Tavakol and Dennick, 2011). Composite scores of Cronbach's alpha were calculated per section (i.e. disorienting dilemma, critical reflection, reflective discourse, action and personal factors) to evaluate the way in which the questions loaded onto the relevant factors. A Cronbach's alpha of more than 0.7 is required to ensure good

reliability (Rockinson-Szapkiw, 2017). Field (2013) makes a concession that in social science a Cronbach's alpha below 0.7 but above 0.5 can be accepted as reliable for questionnaires designed to measured attitudes. The rule of thumb provided by George and Mallery (2003) on the way in which to treat Cronbach' alpha results is explained below.

Cronbach's Alpha	**Comment**
• Greater than 0.9	Excellent
• Greater than 0.8	Good
• Greater than 0.7	Acceptable
• Greater than 0.6	Questionable
• Greater than 0.5	Poor
• Less than 0.5	Unacceptable

This rule of thumb was used to evaluate what was included in the final questionnaire.

5.10.5.1 Disorienting Dilemma (important experiences)

The Cronbach's alpha for disorienting dilemma was α = 0.693, n = 4. These results indicate an acceptable level of internal consistency for the disorienting dilemma scale. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Table 5.8 below.

Table 5.8: Disorienting dilemma - pilot study reliability statistics

#	I have had important experiences (practical/ emotional/ life changing) in the past which can help me:	Mean	Std Dev	N	Variance if item is deleted	Corrected Item Total Correlation	Cronbach's Alpha if item is deleted
1	identify opportunities to start a business	3.50	0.946	20	4.471	0.618	0.537
2	develop relationships with people necessary for business success	3.95	0.759	20	5.526	0.487	0.634
3	manage my own business	3.40	0.883	20	4.892	0.555	0.584
4	work under pressure, stress and constant change experienced if I own a business	3.60	1.231	20	4.555	0.336	0.759

From the table above it can be observed that only in one instance can the scale reliability (Cronbach's alpha) be improved upon and that is by deleting question 4. Despite this, question 4 was not deleted due to the small pilot study sample size. It was expected that Cronbach's alpha (α) could increase in the main study when a larger sample was used.

5.10.5.2 Critical Reflection

The Cronbach's alpha for critical reflection was $\alpha = 0.698$, n = 4. These results indicate an acceptable level of internal consistency for the critical reflection scale. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Table 5.8.

Table 5.9: Critical reflection - pilot study reliability statistics

#	I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me	Mean	Std Dev	N	Variance if item is deleted	Corrected Item Total Correlation	Cronbach's Alpha if item is deleted
6	identify opportunities to start a business	2.95	0.999	20	6.155	0.562	0.590
5	develop relationships with people necessary for business success	3.30	1.031	20	6.411	0.472	0.642
7	manage my own business	3.30	1.081	20	6.305	0.454	0.652
8	work under pressure, stress and constant change experienced if I own a business	2.85	1.226	20	5.734	0.460	0.655

From the table above it can be observed that in no instance can the scale reliability (Cronbach's alpha) be improved upon by deleting any of the questions. Despite a lower than 0.7 Cronbach's alpha **(α),** no change was made to the question because of the small pilot study sample size. It was expected that the Cronbach's alpha **(α)** could increase in the main study when a larger sample was used.

5.10.5.3 Reflective Discourse

The Cronbach's alpha for reflective discourse was $\alpha = 0.839$, n = 4. These results indicate a good level of reliability for reflective discourse. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Table 5.9 below.

Table 5.10: Reflective Discourse - pilot study reliability statistics

#	I have recently had an in depth discussion with someone in which I questioned the way I think about how I can:	Mean	Std Dev	N	Variance if item is deleted	Corrected Item Total Correlation	Cronbach's Alpha if item is deleted
11	identify opportunities to start a business	2.95	0.999	20	6.155	0.562	0.590
12	find a market or geographic territory for a product or service of choice	3.30	1.031	20	6.411	0.472	0.642
13	manage my own business	3.30	1.081	20	6.305	0.454	0.652
14	my ability to work under pressure, stress and constant change experienced if I own a business	2.85	1.226	20	5.734	0.460	0.655

From the table above is can be observed that in no instance can the scale reliability (Cronbach's alpha) be improved upon by deleting any of the questions. No changes were made to these questions.

5.10.5.4 Action

The Cronbach's alpha for action was $\alpha = 0.572$, n = 4. These results indicate a poor level of internal consistency/reliability for action. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Table 5.11.

Table 5.11: Action - pilot study reliability statistics

#	I act in a way which can help me:	Mean	Std Dev	N	Variance if item is deleted	Corrected Item Total Correlation	Cronbach's Alpha if item is deleted
15	identify opportunities to start a business	3.70	1.031	20	4.576	0.398	0.464
16	find a market or geographic territory for a product or service of choice	3.45	0.887	20	6.274	0.076	0.678
17	manage my own business	3.65	1.137	20	4.211	0.406	0.456
18	my ability to work under pressure, stress and constant change experienced if I own a business	3.85	1.040	20	3.958	0.570	0.309

From the table above it can be observed that only in one instance can the scale reliability (Cronbach's alpha) be improved upon and that is by deleting question 16. Due to the poor reliability reflected by the Cronbach's alpha $\alpha < 0.6$ for action, the pilot sample was divided into respondents who were employed part time and those who were unemployed. The results are presented in Table 5.12.

Table 5.12: Action - Cronbach's Alpha (employed vs not employed)

Employment Status	Cronbach's Alpha	N of Items
Not employed	0.132	4
Part-time employed	0.724	4

From the results above, it was decided to retain the questions as it was anticipated that the alpha coefficient would be acceptable if the population was divided into those who are employed part-time and those who are unemployed. Once that distinction was made, the Cronbach's alpha for part-time employed increased to $\alpha = 0.724$, clearly above the recommended 0.70, which is acceptable.

5.10.5.5 Personal factors, background and distortions

The Cronbach's alpha for personal factors was $\alpha = 0.735$, n = 4. These results indicate an acceptable level of internal consistency for personal factors. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Table 5.13.

Table 5.13: Personal factors, background & distortions - pilot study reliability statistics

#		Mean	Std Dev	N	Variance if item is deleted	Corrected Item Total Correlation	Cronbach's Alpha if item is deleted
19	I think experts in the country are supportive of starting new businesses	3.40	1.046	20	40.621	0.283	0.728
20	I think government policies are supportive of starting your own business	3.40	0.940	20	39.568	0.425	0.712
21	My culture and community are supportive of starting your own business	3.20	1.281	20	33.884	0.667	0.670
22	My religion is supportive of starting your own business	3.65	1.089	20	39.713	0.334	0.722
23	The TV, internet and media are supportive of people in business and those who start own businesses	3.85	1.089	20	35.945	0.639	0.681
24	My family will support me if I start my own business	3.90	0.968	20	40.779	0.305	0.725
25	I'm the right age to be in business or start my own business	3.80	1.240	20	38.684	0.341	0.721
26	I have the right life experiences to start my own business	3.65	1.268	20	40.029	0.24	0.736
27	I admire people who start or own their own business	3.95	1.191	20	39.713	0.29	0.728
28	I believe entrepreneurs are born with the relevant traits to start or own a business	3.40	1.231	20	39.253	0.306	0.726
29	I believe anybody can become a successful entrepreneur	3.10	1.447	20	36.274	0.408	0.713

From the table above is can be observed that only in one instance can the scale reliability (Cronbach's alpha) be slightly improved upon and that is by deleting question 26. No changes were made to these

questions on the expectation that the Cronbach's alpha (α) could increase in the main study when a larger sample is used.

5.11 CONCLUSION

Several research concepts to justify the relevant research methodology that was followed in this research were presented in this chapter. Different research philosophies are discussed, followed by a detailed discussion of various research designs, which were classified as quantitative, qualitative, action research and mixed methods. The research methodology section covered issues such as sampling strategies, target population, data collection methods and the study site. This is followed by a discussion of the data analysis strategies used for this research, ethical considerations and limitations of this study and a brief framework of the SHAPE programme. The chapter concludes by presenting the results of the pilot study conducted for this study. Chapter 5 paves the way for an in-depth data analysis and discussion of the research results, which is conducted in chapter 6.

CHAPTER 6 :
RESEARCH RESULTS AND DISCUSSION

6.1 INTRODUCTION

This chapter analyses the data from the main longitudinal study. Reliability statistics are presented first in order to determine whether or not the questionnaire items were testing the factors of interest. This is followed by tests of normality, which provide some guidance as to which tests to use in the data analyses. The results of the study are presented ranging from the demographic information to the results from each factor, namely disorienting dilemma, critical reflection, reflective discourse, action and personal factors. This is followed by a comparison of the results by gender per factor. Factor analysis evaluates the way in which all the items on the questionnaire load. The chapter closes with a summary of the study's problems and findings.

6.2 INTERNAL CONSISTENCY OR RELIABILITY OF INSTRUMENTS

Internal consistency, or reliability, is measured using Cronbach's alpha (Bonett and Wright, 2015). Cronbach's alpha is mostly used when there are multiple items using a Likert scale in a questionnaire (Bonett and Wright, 2015). To factor in the multi-dimensional scale, the Cronbach's alpha was calculated per section (i.e. disorienting dilemma, critical reflection, reflective discourse, action and personal factors). Cronbach's alpha for each question was also calculated. The way in which to evaluate reliability is explained in section 5.9.5 above.

This section presents the Cronbach's alpha for the different elements of transformative learning, namely disorienting dilemma, critical reflection, reflective discourse and action. The reliability statistics for the personal factors of entrepreneurship are also presented.

6.2.1 Reliability Statistics: Disorienting Dilemma

The questionnaire included four (4) items that evaluated the relationships between disorienting dilemma and the four elements of ESE, namely opportunity recognition, relationship, managerial self-efficacy and tolerance self-efficacy. All the questions were answered on a 5 point Likert scale as follows; "No extent", "Limited extent", "Neutral", "Moderate extent" and "Great extent". The results for the three rounds are shown in Table 6.1.

Table 6.1: Cronbach's Alpha – Disorienting Dilemma (Rounds 1-3)

Disorienting Dilemma		
Round	**Cronbach's Alpha**	**N of Items**
Round 1	0.792	4
Round 2	0.841	4
Round 3	0.814	4

From the table above it can be seen that the Cronbach's alpha was α = 0.792 (Round 1), α = 0.841 (Round 2) and α = 0.814 (Round 3). The results indicate a good level of internal consistency for the disorienting dilemma scale. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Annexure 2. An inspection of the item's total statistics table indicated that in no instance can the scale reliability (Cronbach's alpha) be improved by deleting any of the questions. As can be seen, the Cronbach's alpha improved from round 1 to round 2. This improvement is likely due to an improvement in the understanding of the disorienting dilemma questions and an improvement in the participants' understanding of entrepreneurship. .

6.2.2 Reliability Statistics: Critical Reflection

The questionnaire included four (4) items that evaluated the relationships between critical reflection and the four elements of ESE, namely opportunity recognition, marketing, managerial self-efficacy and tolerance self-efficacy. All the questions were answered on a 5 point Likert scale as follows; "No extent", "Limited extent", "Neutral", "Moderate extent" and "Great extent". The results for the three rounds are presented in Table 6.2 below.

Table 6.2: Cronbach's Alpha – Critical Reflection (Rounds 1-3)

Critical Reflection		
Round	**Cronbach's Alpha**	**N of Items**
Round 1	0.853	4
Round 2	0.868	4
Round 3	0.908	4

From the table above it can be seen that the Cronbach's alpha was α = 0.853 (Round 1), α = 0.868 (Round 2) and α = 0.908 (Round 3). The critical reflection results indicate a good level of reliability for Rounds 1 and 2 and an excellent level of reliability for Round 3. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Annexure 3. An inspection of the item's total statistics table indicated that in no instance can the Cronbach's alpha be improved by deleting any of the questions. As can be observed, the Cronbach's alpha improved in rounds 1, 2 and 3. This

improvement is likely due to an improvement in the understanding of the critical reflection questions and an improvement in the participants' understanding of entrepreneurship.

6.2.3 Reliability Statistics: Reflective Discourse

The questionnaire included four (4) items that evaluated the relationships between critical reflection and the four elements of ESE, namely opportunity recognition, marketing, managerial self-efficacy and tolerance self-efficacy. All the questions were answered on a 5 point Likert scale as follows; "No extent", "Limited extent", "Neutral", "Moderate extent" and "Great extent". The results for the three rounds are shown in Table 6.3 below.

Table 6.3: Cronbach's Alpha – Reflective discourse (Rounds 1-3)

Reflective Discourse		
Round	**Cronbach's Alpha**	**N of Items**
Round 1	0.871	4
Round 2	0.882	4
Round 3	0.916	4

From the table above it can be seen that the Cronbach's Alpha was α = 0.871 (Round 1), α = 0.882 (Round 2) and α = 0.916 (Round 3). The reflective discourse results indicate a good level of reliability for rounds 1 and 2 and an excellent level of reliability for round 3. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Annexure 4. An inspection of the item's total statistics table indicated that in no instance can Cronbach's alpha be improved by deleting any of the questions. As can be observed, the Cronbach's alpha improved in Rounds 1, 2 and 3. This improvement is likely due to an improvement in the understanding of the reflective discourse questions and an improvement in the participants' understanding of entrepreneurship.

6.2.4 Reliability Statistics: Action

The questionnaire included four (4) items that evaluated the relationships between critical reflection and the four elements of ESE, namely opportunity recognition, marketing, managerial self-efficacy and tolerance self-efficacy. All the questions were answered on a 5 point Likert scale as follows; "No extent", "Limited extent", "Neutral", "Moderate extent" and "Great extent". The results for the three rounds are shown in Table 6.4 below.

Table 6.4: Cronbach's Alpha – Action (Rounds 1-3)

Action		
Round	**Cronbach's Alpha**	**N of Items**
Round 1	0.868	4
Round 2	0.854	4
Round 3	0.879	4

From the table above it can be seen that the Cronbach's Alpha was α = 0.868 (Round 1), α = 0.854 (Round 2) and α = 0.879 (Round 3). These results indicate a good level of internal consistency for the critical reflection scale. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Annexure 5. An inspection of the item's total statistics table indicated that in no instance can Cronbach's alpha be improved by deleting any of the questions. As can be observed, the Cronbach's alpha improved from round 1 to round 2. This improvement is likely due to an improvement in the understanding of the action questions and an improvement in the participants' understanding of entrepreneurship.

6.2.5 Reliability Statistics: Personal Factors

The questionnaire included eleven (11) questions that evaluated the relationships between personal factors and the four elements of ESE, namely opportunity recognition, marketing, managerial self-efficacy and tolerance self-efficacy. All the questions were answered on a 5 point Likert scale as follows; "No extent", "Limited extent", "Neutral", "Moderate extent" and "Great extent". The results for the three rounds are shown in Table 6.5 below.

Table 6.5: Cronbach's Alpha – Personal Factors (Rounds 1-3)

Personal Factors		
Round	**Cronbach's Alpha**	**N of Items**
Round 1	0.691	11
Round 2	0.629	11
Round 3	0.782	11

From the table above it can be seen that the Cronbach's Alpha was α = 0.691 (Round 1), α = 0.629 (Round 2) and α = 0.782 (Round 3). These results indicate a questionable level of internal consistency for rounds 1 and 2 and an acceptable level of internal consistency for round 3 on the personal factors scale. To evaluate if the total statistics could be improved upon, the item's total statistics are presented in Annexure 6. An inspection of the data analysis indicated that in round 1, Cronbach's alpha would increase to α = 0.720 if question PF10 was deleted. In round 2, Cronbach's alpha would increase to α =

0.676 if question PF10 was deleted. In round 3, Cronbach's alpha would increase to $\alpha = 0.796$ if question PF10 was deleted and $\alpha = 0.784$ if question PF11 was deleted. Cronbach's alpha cannot be improved by deleting any other question. As can be observed, the Cronbach's alpha improved from round 1 to round 2. This improvement is likely due to an improvement in the understanding of the personal factor questions and an improvement in the participants' understanding of entrepreneurship.

The lowering of α by question PF10 is understandable as the question was negatively coded when compared to other questions. For instance, if a person believes that 'entrepreneurs are born with the relevant traits to start or own a business', they in theory should not believe that 'anybody can become a successful entrepreneur'.

6.3 TESTS OF NORMALITY

Numerous statistical procedures rely on an underlying assumption of normality (Park, 2015; Hair et al, 2014; Razali and Wah, 2011). These include procedures such as t-tests, linear regression and analysis of variance (ANOVA) (Razali and Wah, 2011). It is important to test for normality before selecting the relevant statistical tests to be used (Saculinggan and Amor Balase, 2013). Popular tests of normality are the Kolmogorov-Smirnov (KS) and the Shapiro Wilk (W). Each tests the level of significance for the difference from normal distribution (Hair et al, 2014). If the p-value is greater than 0.05, the dataset is normally distributed and a researcher can use parametric tests, if it is significantly skewed then non-parametric tests have to be used (Grande, 2017a; Hair et al, 2014). When the p-value is small (statistically significant) "indicates that the covariance matrices are statically different" (Hair et al, 2014: 577).

There are times when the Kolmogorov-Smirnov (KS) and Shapiro Wilk (W) tests produce different results i.e. one produces a result greater than 0.05, while the other produces a result lower than 0.05. There are a number of different recommendations when this occurs. Some argue that the Shapiro Wilk test is inadequate for a sample size greater than 50 (Park, 2015), while others argue that where differences occur, the Shapiro Wilk test has more statistical power than the Kolmogorov-Smirnov (KS) (Grande, 2017a). The researcher should always be mindful that tests of significance are less useful for less than 30 samples and very sensitive samples larger than 1,000 (Hair et al, 2014).

Kolmogorov-Smirnov and Shapiro Wilk tests were used to test for normality on the main dependent variables, namely disorienting dilemma, critical reflection, reflective discourse, action and personal factors, for all rounds. In no incident was it necessary to make a choice between the Kolmogorov-Smirnov (KS) and Shapiro Wilk (W) tests. The results are summarised in Table 6.6 below.

Table 6.6: Test of Normality (Rounds 1-3)

Tests of Normality	Round 1						Round 2						Round 3					
	Kolmogorov-Smirnovb			Shapiro-Wilk			Kolmogorov-Smirnovb			Shapiro-Wilk			Kolmogorov-Smirnovb			Shapiro-Wilk		
	Statistic	df	Sig	Statistic	df	Sig	Statistic	df	Sig	Statistic	df	Sig	Statistic	df	Sig	Statistic	df	Sig
Disorienting Dilemma	0.107	95.000	0.009	0.976	95.000	0.073	0.139	101.000	0.000	0.936	101.000	0.000	0.147	78.000	0.000	0.952	78.000	0.005
Critical Reflection	0.110	95.000	0.006	0.976	95.000	0.073	0.143	101.000	0.000	0.932	101.000	0.000	0.218	78.000	0.000	0.910	78.000	0.000
Reflective Discourse	0.113	95.000	0.005	0.954	95.000	0.002	0.143	101.000	0.000	0.934	101.000	0.000	0.121	78.000	0.006	0.939	78.000	0.001
Action	0.084	95.000	0.093	0.978	95.000	0.114	0.096	101.000	0.023	0.948	101.000	0.001	0.131	78.000	0.002	0.925	78.000	0.000
Personal Factors	0.065	95.000	.200*	0.991	95.000	0.737	0.091	101.000	0.040	0.983	101.000	0.223	0.087	78.000	.200*	0.979	78.000	0.212

From the table above it can be seen that in Round 1 only the factors action and personal factors are normally distributed. For action D(95) = 0.084, p > .05 and for personal factors D(95) = 0.095, p > .05. The rest of the factors are significantly non-normal, p < 0.05. In Round 2 only personal factors are normally distributed D(101) = 0.223, p > .05. The rest of the factors are significantly non-normal, p < 0.05. In Round 3 only personal factors are normally distributed D(78) = 0.200, p > .05. The rest of the factors are significantly non-normal, p < 0.05.

Based on these results, any further analysis with be performed using non-parametric tests.

6.4 DEMOGRAPHIC INFORMATION OF RESPONDENTS

This section presents a discussion of the response rate and the general section of the questionnaire, which collected general student information, such as name, contact details, gender, whether or not the respondent was a student, race and age. These factors and the responses are discussed in the following paragraphs.

6.4.1 Gender of Respondents

Gender is an important construct in entrepreneurship, as discussed in section 2.3.8. This is mostly because, according to Herrington et al. (2017), males are more likely to be involved in entrepreneurial activities than females in most cultures. The gender composition participating in the three rounds of the study are presented in Table 6.7 below.

Table 6.7: Gender of all respondents

		Gender					
		Round 1		**Round 2**		**Round 3**	
		Frequency	**Percentage**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Valid	1 Male	60	43.5%	24	16.7%	49	38.9%
	2 Female	78	56.5%	38	26.4%	72	57.1%
	3 Missing	0	0.0%	82	56.9%	5	4.0%
	Total	**138**	**100.0%**	**144**	**100.0%**	**126**	**100.0%**

From the table above it can be seen that females were significantly better represented than males in all the three rounds of the study (56.5% in Round 1, 26.4% in Round 2 and 57.1% in Round 3). It should also be noted that in Round 2 a significant number of respondents did not indicate their gender.

Table 6.8 indicates the gender distribution of the respondents who participated in all 3 rounds, which is a subset of Table 6.7.

Table 6.8: Gender of respondents who participated in all rounds

		Frequency	Percentage
Valid	1 Male	21	35.0%
	2 Female	39	65.0%
	Total	**60**	**100.0%**

From the table above it can be seen that there were significantly more females than males that participated in all three rounds of the study (65.0%). This proportion is slightly more than if all the respondents in all rounds were taken into account. This implies that females were slightly more diligent in responding to the questionnaires that were provided and most likely attended more SHAPE sessions than males.

The overall sample was consistent in terms of gender composition, when compared to the 2015 general university student population, which was 58.33% female and 41.67% male (Council of Higher Education, 2017). For participants who took park in all the samples, females were slightly over-represented.

6.4.2 Age of Respondents

Age is an important construct in the study of entrepreneurship, as entrepreneurship tends to be favoured more by people between the ages of 25 years and 55 years (Herrington et al., 2017). Table 6.9 presents the age distribution of the respondents in the study.

Table 6.9: Age distribution of all respondents

		Age					
		Round 1		Round 2		Round 3	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Valid	1 < 20	0	0.0%	1	0.7%	0	0.0%
	2 20-25	42	30.4%	103	71.5%	89	70.6%
	3 26- 30	12	8.7%	23	16.0%	18	14.3%
	4 >30	7	5.1%	17	11.8%	19	15.1%
	Missing	77	55.8%	0	0.0%	0	0.0%
	Total	**138**	**100.0%**	**144**	**100.0%**	**126**	**100.0%**

From the table above it can be seen that the group 20 - 25 years of age dominates, especially in Rounds 2 and 3, where there are no missing values. In both Rounds 2 and 3, the 20- 25 year age group comprises more than 70% of the sample. Table 6.10 indicates the age distribution of only those participants who participated in all three rounds.

Table 6.10: Age distribution of respondents who participated in all rounds

Age		Frequency	Percentage
Valid	1 < 20	0	0.0%
	2 20 – 25	44	73.3%
	3 26 – 30	9	15.0%
	4 > 30	7	11.7%
	Missing	0	0.0%
	Total	**60**	**100.0%**

From the table above it can be seen that the group 20 - 25 years of age dominates with 73%, followed by 15% aged from 26 to 30 years and only 11.7% were over the age of 30 years.

The overall age distribution was dominated by 20 to 25 year olds because the SHAPE programme was targeted at students in their third or fourth year of study. These students would mostly be in that age range. No further analysis was performed based on age, as entrepreneurship studies usually have different age ranges, for example 25 to 55 years of age or 25 to 34 years of age, 35 to 44 years of age and so forth (Herrington et al., 2017). This study was generally focused on one age group.

6.4.3 Race of Respondents

The study also asked people's race to allow for better analysis of the results. Table 6.11 indicates the race distribution of all respondents in the study.

Table 6.11: Race distribution of all respondents

		Race					
		Round 1		Round 2		Round 3	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Valid	Black	95	68.8%	109	75.7%	94	74.6%
	Coloured	39	28.3%	30	20.8%	26	20.6%
	Indian	4	2.9%	3	2.1%	4	3.2%
	White	0	0.0%	1	0.7%	0	0.0%
	Missing	0	0.0%	1	0.7%	2	1.6%
	Total	**138**	**100.0%**	**144**	**100.0%**	**126**	**100.0%**

From the table above it is apparent that students who identify themselves as black were in the majority, 68.8% in Round 1, 75.7% in Round 2 and 74.6% in Round 3. The other well represented group were individuals who identify themselves as coloured. Indians and whites comprised an insignificant portion of the respondent group.

Table 6.12 presents the race distribution of the respondents who responded in all 3 rounds of the study.

Table 6.12: Race distribution of respondents who participated in all rounds

		Frequency	Percentage
Valid	Black	41	68.3%
	Coloured	4	6.7%
	Indian	15	25.0%
	White	0	0.0%
	Total	**60**	**100.0%**

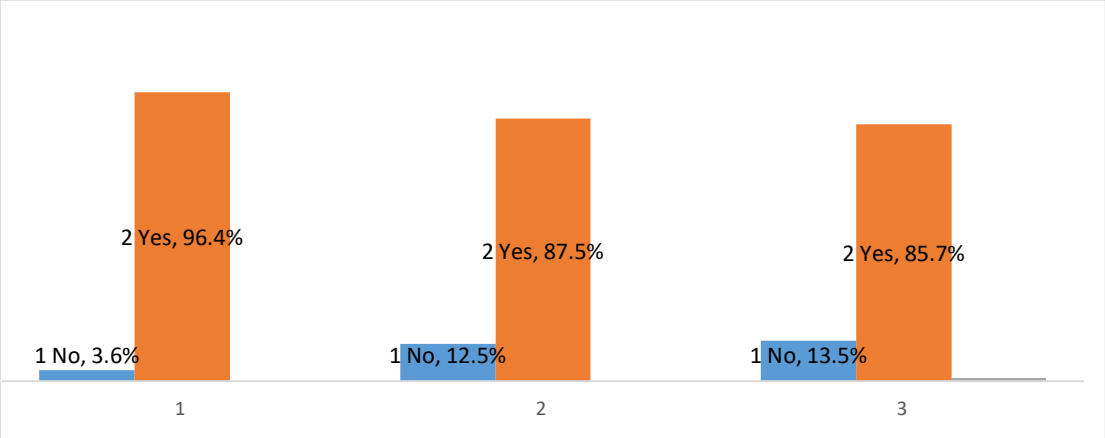
From the table above it is apparent that students who identify themselves as black made up the majority of the respondents (68.3%) who participated in all 3 rounds. This was followed by Indians at 25% and coloureds at 6.7%. No other racial group is represented among the respondents who participated in all three rounds.

The sample was close to the 2015 general university student population's racial composition, where black students made up 70.7% of the total student population (Council of Higher Education, 2017). Other races' representation in the study, in line with the total student population, was that coloured students were over-represented, while white and Indian students were under-represented (Council of Higher Education, 2017). In light of this, no further analysis was conducted based on race.

6.4.4 Student Respondents

Most studies into entrepreneurship are conducted on students and this study is not different, as shown in Figure 6.2 below. In justifying the use of students as study subjects, Hsu et al. (2015) hold that the moment students draw up a business plan, they are not just students anymore, they should be considered as nascent entrepreneurs. Figure 6.1 below indicates the respondents categorised by whether or not they were students at the time.

Figure 6.1: Student respondents



From Figure 6.2 above it can be seen that most of the respondents were students, 96.4% in Round 1, 87.5% in Round 2 and 85.7% in Round 3. If only the 60 respondents common to all three rounds are taken into account, 83.33% were students. This was mostly due to the SHAPE program targeting students in their second and third years of study and being offered in a university setting. Only a few non students attended the programme by special request. In light of these results, no further analysis was conducted based on whether or not a participant was a student.

6.5 RESEARCH QUESTION 1: TO WHAT EXTENT DOES DISORIENTING DILEMMA (SIGNIFICANT EXPERIENCES) DEVELOP ESE?

In order to answer the first research question, related "**to what extent does disorienting dilemma (significant experiences) develop ESE"** this research investigated the following goals.

A. To determine if disorienting dilemmas (significant experiences) develop opportunity identification self-efficacy.

B. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's relationship self-efficacy.

C. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's managerial self-efficacy.

D. To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's tolerance self-efficacy.

The relevant hypothesis (H^1) dealing with **disorienting dilemma** is:

H^1: There is a significant change to participants' entrepreneurial self-efficacy (ESE) due to disorienting dilemma following his/ her attending the SHAPE training program.

A disorienting dilemma (important experience) is the first stage in transformative learning, as it triggers critical reflection (Mälkki, 2012). A disorienting dilemma can be a slow process (Mälkki, 2012; Mezirow and Marsick, 1978) or sudden, triggered by a crisis (Kakouris, 2015; Merriam, 2006). In the questionnaire, disorienting dilemma was termed "important experience" to make it simpler for respondents to understand the relevant questions.

This section presents the research results from questions regarding disorienting dilemma.

6.5.1 Disorienting Dilemma and Opportunity Identification

The first item with regard to disorienting dilemma was: **I have had important experiences (practical/ emotional/ life changing) in the past, which can help me identify opportunities to start a business.** This item was focused directly on the research goal: **To determine if disorienting dilemmas (significant experiences) develop opportunity identification self-efficacy.**

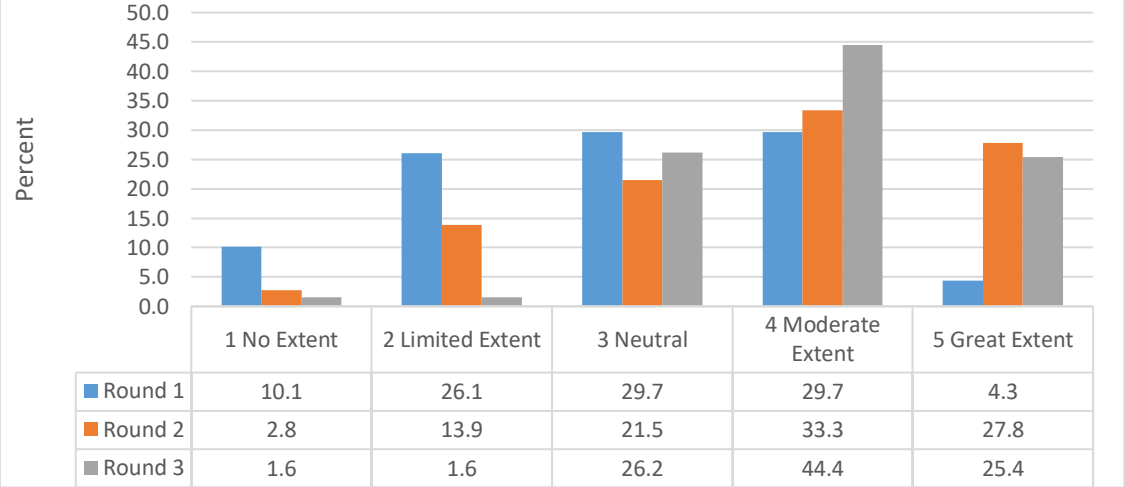
Opportunity recognition is when an individual goes through a search process that leads to the identification of an exploitable opportunity (Baron, 2004). This question is an attempt to evaluate whether or not the participant had an experience that he deems disorienting enough to consider available business opportunities. The results from all the respondents in the study are presented in Table 6.13 below.

Table 6.13: Disorienting Dilemma and Opportunity Identification (Rounds 1-3) All

	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	14	10.1	10.1	10.1	4	2.8	2.8	2.8	2	1.6	1.6	1.6
2. Limited Extent	36	26.1	26.1	36.2	20	14.0	14.0	16.8	2	1.6	1.6	3.2
3. Neutral	41	29.7	29.7	65.9	31	21.7	21.7	38.5	33	26.2	26.4	29.6
4. Moderate Extent	41	29.7	29.7	95.7	48	33.7	33.6	72.0	56	44.4	44.8	74.4
5. Great Extent	6	4.3	4.3	100.0	40	28.0	28.0	100.0	32	25.4	25.6	100.0
6. Missing Value									1	0.8		
Total	**138**	**100.0**	**100.0**		**143**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.2 below, which allows for a clearer visual presentation.

Figure 6.2: Disorienting Dilemma and Opportunity Identification (Rounds 1-3)-All



From Table 6.13 and Figure 6.2 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" increased from 34.1% in Round 1 to 61.5% in Round 2 and then to 69.8% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 36.2% in Round 1, to 16.8% in Round 2 and 3.2% in Round 3.

Table 6.14 below indicates the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.14: Disorienting Dilemma and Opportunity Identification (Rounds 1-3)-

	Round 1				**Round 2**				**Round 3**			
	FQ	**%**	**Valid %**	**Cum %**	**FQ**	**%**	**Valid %**	**Cum %**	**FQ**	**%**	**Valid %**	**Cum %**
1. No Extent	4	6.7	6.7	6.7					2	3.3	3.3	3.3
2. Limited Extent	16	26.7	26.7	33.3	9	15.0	15.0	15.0				
3. Neutral	18	30.0	30.0	63.3	14	23.3	23.3	38.3	15	25.0	25.0	28.3
4. Moderate Extent	18	30.0	30.0	93.3	19	31.7	31.7	70.0	32	53.3	53.3	81.7
5. Great Extent	4	6.7	6.7	100.0	18	30.0	30.0	100.0	11	18.3	18.3	100.0
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.14, indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 36.7% in Round 1 to 61.7% in Round 2 and then 71.6% in Round 3. The percentage of respondents selecting "No

Extent" and "Limited Extent" reduced from 33.4% in Round 1, to 15.0% in Round 2 and 3.3% in Round 3.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern in both sets of data is a significant percentage of neutral responses. Even after completing the training programme, 25% of the respondents who participated in all rounds and 26.2% of all respondents were neutral. It is the researcher's considered view that the people who were neutral in Round 3 were negative in Round 1. In that case, the attitude would have improved as a result of attending the SHAPE programme.

Considering these results, it can be argued that respondents experienced disorienting dilemma to increase their opportunity identification self-efficacy. This improvement is especially pronounced between rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 68.12% and only 16.05% between rounds 2 and 3. This significant improvement between Rounds 1 and 2 could be as a result of the new learning the participants were exposed to by presenters who taught and also shared their experiences as entrepreneurs.

6.5.2 Disorienting Dilemma and Relationship Self-Efficacy

The second item relating to disorienting dilemma was: **I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success.** This item was focused directly on the research goal: **To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's relationship self-efficacy.**

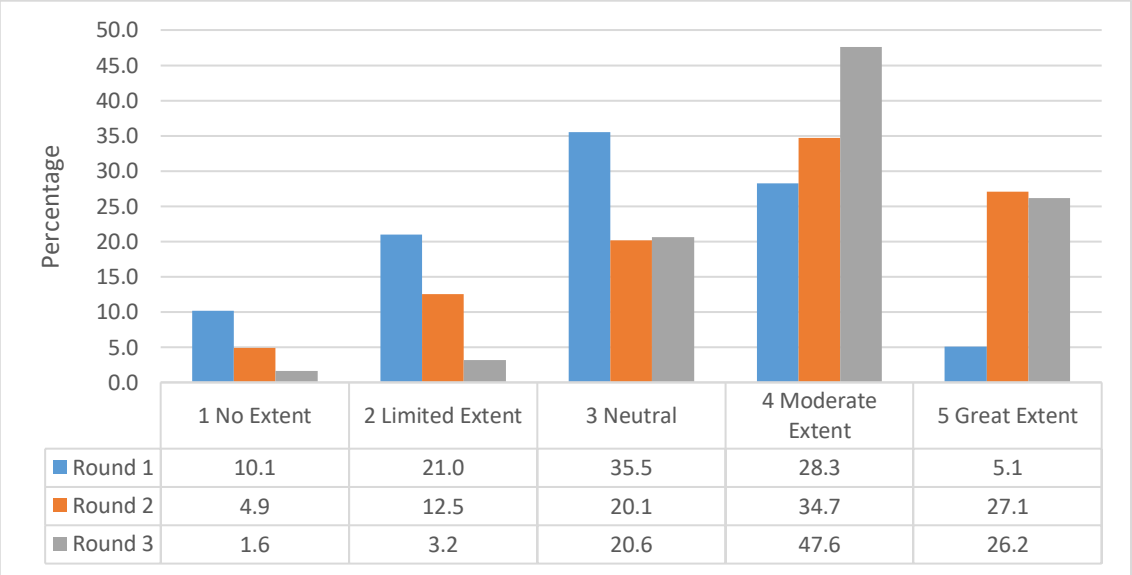
Relationship self-efficacy is an individual's ability to develop relationships with relevant parties such as banks and investors (Barbosa et al., 2007; Kickul et al., 2009). This is also known as marshalling (Kickul et al., 2009). This question was an attempt to evaluate whether or not a person had an experience that he deemed disorienting enough to consider developing helpful relationships. The results are presented in Table 6.15 below, which indicates the results from all the respondents in the study.

Table 6.15: Disorienting Dilemma and Developing Relationships (Rounds 1-3)

	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	14	10.1	10.1	10.1	7	4.9	4.9	4.9	2	1.6	1.6	1.6
2. Limited Extent	29	21.0	21.0	31.2	18	12.5	12.6	17.5	4	3.2	3.2	4.8
3. Neutral	49	35.5	35.5	66.7	29	20.1	20.3	37.8	26	20.6	20.8	25.6
4. Moderate Extent	39	28.3	28.3	94.9	50	34.7	35.0	72.7	60	47.6	48.0	73.6
5. Great Extent	7	5.1	5.1	100.0	39	27.1	27.3	100.0	33	26.2	26.4	100.0
6. Missing Value					1	0.7			1	0.8		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.3 below, which allows a clearer visual presentation.

Figure 6.3: Disorienting Dilemma and Developing Relationships Self-Efficacy (Rounds 1-3)



From Table 6.15 and Figure 6.3 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 33.3% in Round 1 to 61.8% in Round 2 and 73.8% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 31.2% in Round 1, to 17.4% in Round 2 and 4.8% in Round 3.

Table 6.16 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.16: Disorienting Dilemma and Developing Relationships (Rounds 1-3)

DD2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	3	5.0	5.0	5.0	2	3.3	3.3	3.3	2	3.3	3.3	3.3
2. Limited Extent	14	23.3	23.3	28.3	8	13.3	13.3	16.7	1	1.7	1.7	5.0
3. Neutral	22	36.7	36.7	65.0	13	21.7	21.7	38.3	17	28.3	28.3	33.3
4. Moderate Extent	17	28.3	28.3	93.3	21	35.0	35.0	73.3	31	51.7	51.7	85.0
5. Great Extent	4	6.7	6.7	100.0	16	26.7	26.7	100.0	9	15.0	15.0	100.0
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

As above, Table 6.16 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 35.0% in Round 1 to 61.7% in Round 2 and 66.7% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 28.3% in Round 1, to 16.6% in Round 2 and 5.0% in Round 3.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern in both sets of data is the significant percentage of neutral responses. Even after completing the training programme, 28.3% of the respondents who participated in all 3 rounds and 20.6% of all the respondents were neutral. Specifically for respondents who participated in all 3 rounds, the percentage of neutral respondents increased from 21.7% in Round 2 to 28.3% in Round 3. After Round 2 people began working on their business ideas in groups. It is possible that some began to question their relationship efficacy.

Considering the results presented above, the logical conclusion can be drawn that respondents who experienced disorienting dilemma increased their opportunity relationship self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all 3 rounds), where the positive responses increased by 76.29% and only 8.10% between Rounds 2 and 3. This significant improvement between Rounds 1 and 2 could be as a result of the new learning participants experienced from presenters who taught and also shared their experiences as entrepreneurs.

6.5.3 Disorienting Dilemma and Managerial Self-Efficacy

The third item with regard to disorienting dilemma was: **I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business.** This item focused directly on the research goal: **To determine whether or not disorienting dilemmas (significant experiences) develop an entrepreneur's managerial self-efficacy.**

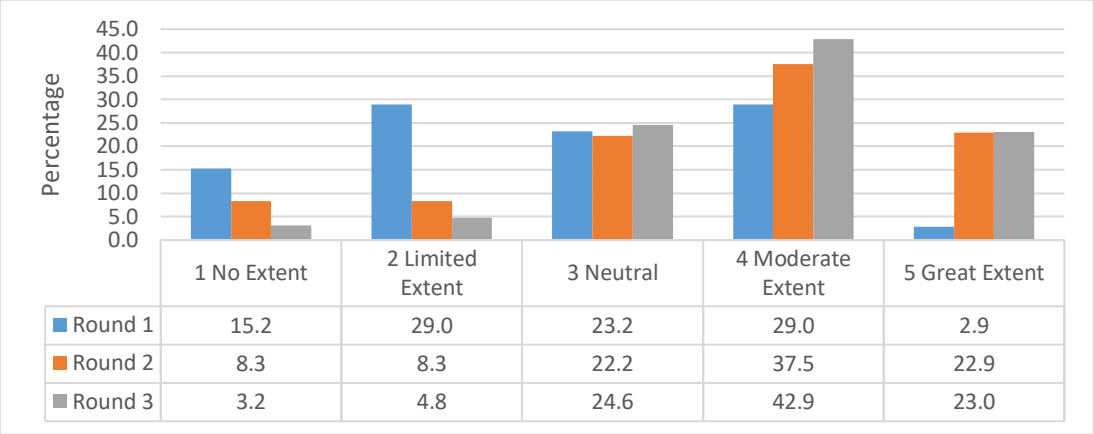
Managerial self-efficacy is an individual's perceived ability to control finances and other resources (De Noble et al, 1999; Chen et al, 1998) and act as manager, disseminator, figurehead, negotiator, liaison and spokesman of the business (Pavett and Lau, 1983). This question was an attempt to evaluate whether or not a person had an experience that he deems useful in managing his or her own business. The results are presented in Table 6.17 below, which indicates the results from all the respondents in the study.

Table 6.17: Disorienting Dilemma and Managerial Self-Efficacy (Rounds 1-3)

DD3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	21	15.2	15.3	15.3	12	8.3	8.4	8.4	4	3.2	3.2	3.2
2. Limited Extent	40	29.0	29.2	44.5	12	8.3	8.4	16.8	6	4.8	4.8	8.1
3. Neutral	32	23.2	23.4	67.9	32	22.2	22.4	39.2	31	24.6	25.0	33.1
4. Moderate Extent	40	29.0	29.2	97.1	54	37.5	37.8	76.9	54	42.9	43.5	76.6
5. Great Extent	4	2.9	2.9	100.0	33	22.9	23.1	100.0	29	23.0	23.4	100.0
6. Missing Value	1	0.7			1	0.7			2	1.6		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.4 below, which allows for an easier visual representation.

Figure 6.4: Disorienting Dilemma and Managerial Self-Efficacy (Rounds 1-3)



From Table 6.17 and Figure 6.4 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 31.9% in Round 1 to 60.4% in Round 2 and 65.9% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 44.2% in Round 1 to 16.7% in Round 2 and 8.1% in Round 3.

Table 6.18 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.18: Disorienting Dilemma and Managerial Self-Efficacy (Rounds 1-3)

DD3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	6	10.0	10.0	10.0	3	5.0	5.0	5.0	3	5.0	5.1	5.1
2. Limited Extent	18	30.0	30.0	40.0	9	15.0	15.0	20.0	4	6.7	6.8	11.9
3. Neutral	16	26.7	26.7	66.7	14	23.3	23.3	43.3	16	26.7	27.1	39.0
4. Moderate Extent	17	28.3	28.3	95.0	21	35.0	35.0	78.3	29	48.3	49.2	88.1
5. Great Extent	3	5.0	5.0	100.0	13	21.7	21.7	100.0	7	11.7	11.9	100.0
6. Missing Value									1	1.7		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.18 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 33.3% in Round 1 to 56.7% in Round 2 and 60.0% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 40.0% in Round 1 to 20.0% in Round 2 and 11.9% in Round 3.

Based on the results presented in table 6.18 there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern in both sets of data is the significant percentage of neutral responses. Even after completing the training programme, 26.7% of the respondents who participated in all the rounds and 24.6% of all the respondents were neutral. In fact, the percentage of neutral respondents increased from Round 2 to Round 3. It is likely that some people who were negative i.e. "No extent" and "Limited extent" in Round 2 upgraded their managerial efficacy to neutral. This analysis is based on the understanding that there were fewer people with a negative evaluation in Round 3 than in Round 2. The substantial number of neutral scores for this question could be interpreted in the context of overall scoring becoming more positive.

Considering the results above, it can be argued that respondents experienced disorienting dilemma to increase their opportunity managerial self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 70.27% and only 5.82% between Rounds 2 and 3. This significant improvement between Rounds 1 and 2 could be as a result of the new learning participants experienced from presenters who taught and also shared their experiences as entrepreneurs.

6.5.4 Disorienting Dilemma and Tolerance Self-Efficacy

The fourth item with regard to disorienting dilemma was: **I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business.** This item was focused directly on the research goal: **To determine if disorienting dilemmas (significant experiences) develop an entrepreneur's tolerance self-efficacy.**

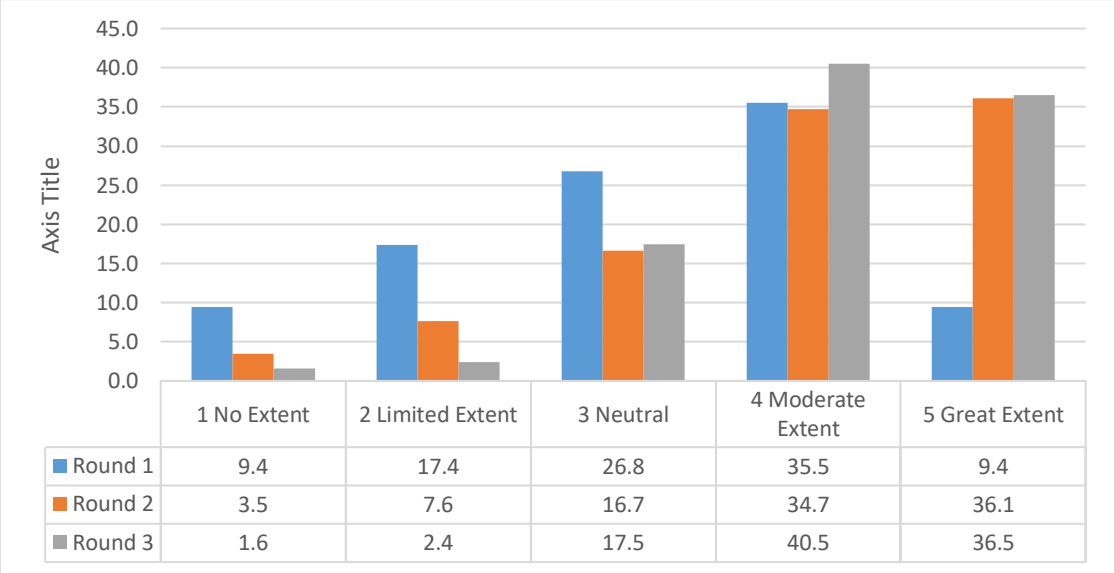
Tolerance self-efficacy is a person's ability to work productively under pressure, stress, constant change and sometimes conflict (De Noble et al., 1999). Tolerance self-efficacy is important in the current era of 'liquid modernity', where people struggle to find their place in society and become stressed by feelings of 'uprootedness', anxiety and insecurity (Elliott, 2013). This question was aimed at evaluating whether or not a person has had important experiences that he or she deems useful in being able to handle the constant changes experienced in business. The results are presented in Table 6.19 below, which indicates the results from all the respondents in the study.

Table 6.19: Disorienting Dilemma and Tolerance Self-Efficacy (Rounds 1-3)

DD4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	13	9.4	9.6	9.6	5	3.5	3.5	3.5	2	1.6	1.6	1.6
2. Limited Extent	24	17.4	17.6	27.2	11	7.6	7.7	11.3	3	2.4	2.4	4.0
3. Neutral	37	26.8	27.2	54.4	24	16.7	16.9	28.2	22	17.5	17.7	21.8
4. Moderate Extent	49	35.5	36.0	90.4	50	34.7	35.2	63.4	51	40.5	41.1	62.9
5. Great Extent	13	9.4	9.6	100.0	52	36.1	36.6	100.0	46	36.5	37.1	100.0
6. Missing Value	2	1.4			2	1.4			2	1.6		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.5 below, which allows for an easier visual representation.

Figure 6.5: Disorienting Dilemma and Tolerance Self-Efficacy (Rounds 1-3)



From table 6.19 and Figure 6.5 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 44.9% in Round 1 to 70.8% in Round 2 and 77.0% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 27.2% in Round 1 to 11.3% in Round 2 and 4.0% in Round 3.

Table 6.20 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.20: Disorienting Dilemma and Tolerance Self-Efficacy (Rounds 1-3)

DD4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	4	6.7	6.8	6.8	1	1.7	1.7	1.7	2	3.3	3.3	3.3
2. Limited Extent	9	15.0	15.3	22.0	5	8.3	8.3	10.0	2	3.3	3.3	6.7
3. Neutral	14	23.3	23.7	45.8	9	15.0	15.0	25.0	12	20.0	20.0	26.7
4. Moderate Extent	27	45.0	45.8	91.5	21	35.0	35.0	60.0	26	43.3	43.3	70.0
5. Great Extent	5	8.3	8.5	100.0	24	40.0	40.0	100.0	18	30.0	30.0	100.0
6. Missing Value	1	1.7										
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.20 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 53.3% in Round 1 to 75.0% in Round 2 and then decreased to 73.3% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced as follows: 21.7% in Round 1, 10.0% in Round 2 and 6.6% in Round 3.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern in both sets of data is an increasing number of neutral responses, especially with those who participated in all the rounds. After completing the training programme, 20.0% of the respondents who participated in all the rounds and 17.5% of all the respondents were neutral. In fact, the percentage of neutral respondents increased from Round 2 to Round 3. It is likely that some people who were negative i.e. those who answered “No extent” and “Limited extent” in Round 2, upgraded their tolerance self-efficacy to positive. This analysis is based on the understanding that there were fewer people with negative evaluations in Round 3 than in Round 2. The substantial number of neutral scores for this question could be interpreted in the context of overall scoring becoming more positive.

Considering the results presented above, it can be argued that the respondents experienced disorienting dilemma to increase their tolerance self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 40.7% and reduced by only 2.27% between Rounds 2 and 3. This significant improvement between Rounds 1 and 2 could be as a result of all the new learning participants experienced from presenters who taught and also shared their experiences as entrepreneurs. The reduction in positive responses is insignificant.

6.5.5 Examples of Disorienting Dilemmas

The research question was: **What was your significant experience, please specify.**

This was an open-ended question designed to allow respondents to specify their experiences that they deemed to be disorienting. After receiving the responses, the researcher read through them twice and created categories the responses were supposed to follow. The researcher then assigned codes to the categories and then coded all the responses. The detailed results are presented in Table 6.21 below.

Table 6.21: Examples of Disorienting Dilemmas Experienced (Rounds 1 - 3)

DD5	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. Employed by an organisation/ Internship	30	20.8%	34.1%	34.1%	25	16.2%	26.3%	26.3%	17	12.8%	27.4%	27.4%
2. Significant life experience e.g. business failure, death in family	18	12.5%	20.5%	54.5%	8	5.2%	8.4%	34.7%	5	3.8%	8.1%	35.5%
3. Owned a business/ promoted or sold something	10	6.9%	11.4%	65.9%	15	9.7%	15.8%	50.5%	8	6.0%	12.9%	48.4%
4. Unemployed or bored with nothing to do	1	0.7%	1.1%	67.0%	2	1.3%	2.1%	52.6%	1	0.8%	1.6%	50.0%
5. University/ school projects experiences	6	4.2%	6.8%	73.9%	10	6.5%	10.5%	63.2%	3	2.3%	4.8%	54.8%
6. Seeing unexploited opportunities or formal investigation of opportunities	1	0.7%	1.1%	75.0%	5	3.2%	5.3%	68.4%	2	1.5%	3.2%	58.1%
7. Close relation had/ has a business	17	11.8%	19.3%	94.3%	15	9.7%	15.8%	84.2%	6	4.5%	9.7%	67.7%
8. Own business failing	0	0.0%	0.0%	94.3%	2	1.3%	2.1%	86.3%	1	0.8%	1.6%	69.4%
9. Shape related experiences (video or presenter)	0	0.0%	0.0%	94.3%	6	3.9%	6.3%	92.6%	7	5.3%	11.3%	80.6%
10. Other	5	3.5%	5.7%	100.0%	7	4.5%	7.4%	100.0%	12	9.0%	19.4%	100.0%
11. Missing Value	56	38.9%			59	38.3%			71	53.4%		
Total	**144**	**100.0%**	**100%**		**154**	**100%**	**100%**		**133**	**100%**	**100%**	

From Table 6.21 above it can be seen that the items identified by most of the participants as being of the most importance were: in Round 1 "Employed by an organisation" (30 respondents), "Significant life experience" (18 respondents) and "Close relation has a business" (17 respondents). In Round 2 the most important experiences were "Employed by an organisation" (25 respondents), "Owned a business or sold something" (15 respondents) and "Close relation has a business" (15 respondents). In Round 3 the most important experiences were "Employed by an organisation" (17 respondents), "Owned a business or sold something" (8 respondents) and "SHAPE-related experiences" (7 respondents). A substantial number of the respondents did not complete this open-ended question, 56 in Round 1, 59 in Round 2 and 71 in Round 3. It can be seen that the respondents deemed their employment experiences as the most important experiences relevant to their own ESE.

6.5.6 Disorienting Dilemma - Overall Descriptive Statistics

To gain a summarised understanding of disorienting dilemma, the aggregate scores were calculated and these are presented in Table 6.22 below.

Table 6.22: Disorienting Dilemmas Descriptive Statistics

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Disorienting Dilemma (All Respondents)	135	2.959	0.862	142	3.720	0.930	123	3.929	0.716
Disorienting Dilemma (All Rounds Respondents)	60	3.082	0.825	60	3.754	0.930	60	3.767	0.745

From the table above it is clear that there was a general increase in means from Round 1 up to Round 3 for disorienting dilemma based on the aggregate scores. To evaluate the level of change, percentage increases were calculated and the results are presented in Table 6.23 below.

Table 6.23: Percentage Increases in Disorienting Dilemma means (Rounds 1 - 3)

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Disorienting Dilemma (All Respondents)	25.7%	32.8%	5.6%
Disorienting Dilemma (All Rounds Respondents)	21.8%	22.2%	0.3%

From the table above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was higher than the increase from Rounds 2 to 3. When considering the scores for the participants in all 3 rounds, there was a marginal increase in scores between Rounds 2 and 3.

For a better understanding of the descriptive scores, further analysis was performed with regard to gender in all 3 rounds. The results are presented in Tables 6.24 and 6.25 and Figure 6.6 below.

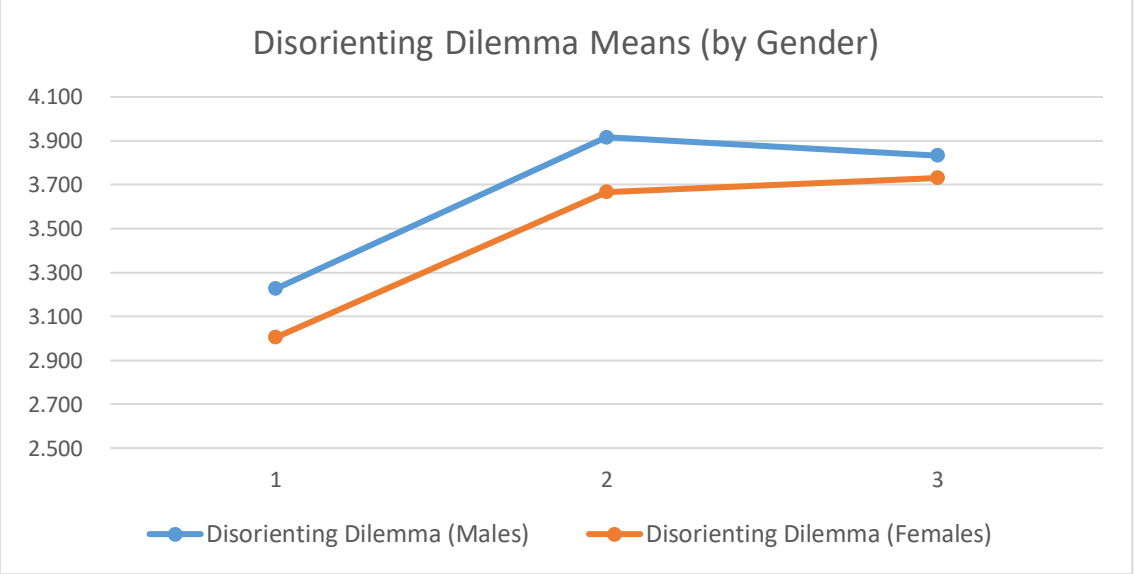
Table 6.24: Disorienting Dilemmas Descriptive Statistics by Gender

Descriptives	Round 1			Round 2				Round 3	
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Disorienting Dilemma (Males)	21	3.226	0.774	21	3.917	0.730	21	3.833	0.443
Disorienting Dilemma (Females)	39	3.004	0.850	39	3.667	1.020	39	3.731	0.869
Disorienting Dilemma (Overall)	60	3.082	0.825	60	3.754	0.930	60	3.767	0.745

Table 6.25: Percentage Increases in Disorienting Dilemma Means by Gender

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Disorienting Dilemma (Males)	21.4%	18.8%	-2.1%
Disorienting Dilemma (Females)	22.0%	24.2%	1.7%
Disorienting Dilemma (Overall)	21.8%	22.2%	0.3%

Figure 6.6: Changes in Disorienting Dilemma by Gender



From the tables and figure above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was significantly higher than the increase from Rounds 2 to 3 for both genders. In fact, the increases in means are slightly higher for females than males. The mean for males actually decreased from Round 2 and Round 3. It should however be highlighted that the sample of males was too small at 21 participants in all 3 rounds of the study to draw any further conclusions.

For further analysis, the disorienting dilemma hypothesis was tested.

Hypothesis Testing

Testing the hypotheses for this study was achieved by conducting a repeated measures ANOVA in SPSS. This was deemed necessary as the repeatedly measured ANOVA is ideal when deploying the instrument multiple times with the same participants (Grande, 2015), as in a longitudinal study. Several tests can be used to test the significance of change over time, namely Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root. All these tests perform the same function (Grande, 2015) and Wilks' Lambda was the preferred statistical test for reporting. After running the test of significance, Mauchly's test of sphericity was run. Sphericity is where the variances of differences of all pairs of groups are equal (Grande, 2015). The results of sphericity should be greater than $p > 0.05$ in order to meet the assumptions of sphericity. Thereafter, tests of within-subjects effects were conducted followed by tests of within-subjects contrasts. In the tests of between subjects effects, the level of significance and partial Eta squared are interpreted. The partial Eta squared (η^2) explains the amount of variance that can be explained by the programme (Grande, 2015). If $p < 0.05$, it means the change is significant (Grande, 2015). Finally, profile plots were used to indicate the changes and the significance of those changes were examined using the Bonferroni post hoc test.

The results of the ESE and disorienting dilemma hypothesis are presented below.

6.5.7 ESE and Disorienting Dilemma (H^1)

The hypothesis being tested in this section was:

H^1: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **disorienting dilemma** following their attendance of the SHAPE training program.

After conducting multivariate tests to evaluate the significance of the change, the results are as presented in Table 6.26.

Table 6.26: Multivariate Tests – Disorienting Dilemma (Rounds 1 - 3)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Disorienting Dilemma	Pillai's Trace	0.398	18.209	2.000	55.000	0.000	0.398	36.418	1.000
	Wilks' Lambda	0.602	18.209	2.000	55.000	0.000	0.398	36.418	1.000
	Hotelling's Trace	0.662	18.209	2.000	55.000	0.000	0.398	36.418	1.000
	Roy's Largest Root	0.662	18.209	2.000	55.000	0.000	0.398	36.418	1.000

From the table above it can be seen that there was a statistically significant increase in ESE due to disorienting dilemma after the SHAPE training program, Wilk's $\mathbf{\Lambda}$ = 0.602, F (2, 55.0) = 18.209, p < 0.05, partial $\boldsymbol{\eta}^2$ = .398.

As the Wilk's Lambda and other multivariate tests were significant, Mauchly's test of sphericity was run to evaluate whether or not the variances of differences of all pairs of groups were equal. The results are presented in Table 6.27 below.

Table 6.27: Mauchly's Test of Sphericity – Disorienting Dilemma (Rounds 1 - 3)

Within subjects Effect	Mauchly's W	Approx Chi-Square	df	Sig	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Disorienting Dilemma	0.969	1.745	2	0.418	0.970	1.000	0.500

Mauchly's test indicated that the assumption of sphericity had not been violated ($\chi^2(2) = 0.969$, p > 0.05) and it was therefore deemed good enough to perform tests of within subjects effects as indicated in Table 6.28 below.

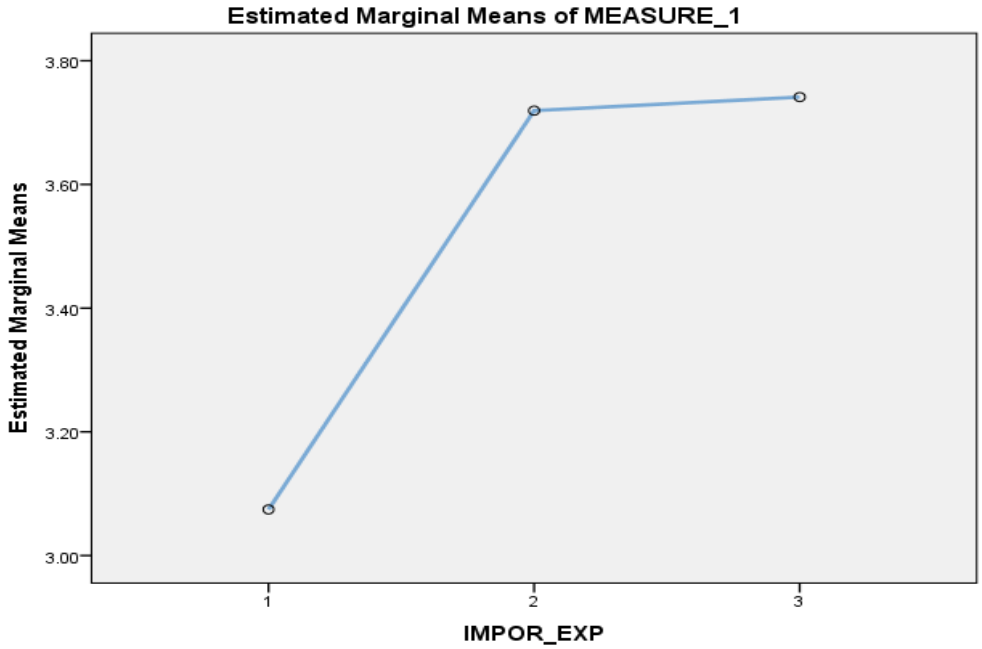
Table 6.28: Tests of within subjects effects – Disorienting Dilemma (Rounds 1 - 3)

Source	Sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intecept	2108.773	1.000	2108.773	1757.705	0.000	0.969	1757.705	1.000
Error	67.185	56.000	1.200					

a. Computed using alpha = .05

There was a significant within subjects effect of disorienting dilemma on ESE scores overall, F(1, 56) = 1757.705, p < 0.05, $\boldsymbol{\eta}_p^2$ = 0.969). This is further explained by the profile plots in Figure 6.7 below.

Figure 6.7: Profile Plots - Disorienting Dilemma (Rounds 1 - 3)



The profile plots in Figure 6.7 indicate that the mean for ESE increased steeply due to disorienting dilemma from Round 1 to Round 2 and more or less levelled off between Round 2 and 3.

To evaluate the significance of changes we can examine the results of the Bonferroni post hoc test. The Bonferroni post hoc test is an alpha adjustment of the selected alpha level to control for overall Type 1 error (Hair et al, 2014). These are presented in the pairwise comparison in Table 6.29 below.

Table 6.29: Pairwise Comparisons: Disorienting Dilemma (Rounds 1 - 3)

Disorienting Dilemma		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.672*	0.113	0.000	-0.951	-0.394
1	3	-.685*	0.133	0.000	-1.013	-0.356
2	3	-0.013	0.116	1.000	-0.299	0.274

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

The above post hoc comparisons using the Bonferroni correction indicate that the mean score from Round 1 (M = 2.959, SD = 0.862) was significantly different from Round 2 (M = 3.720, SD = 0.930) and Round 3 (M = 3.929, SD = 0.716). However, the mean for Round 2 (M = 3.720, SD = 0.930) was not significantly different from that of Round 3 (M = 3.929, SD = 0.716).

These findings lead us to reject the null hypothesis ($\mathbf{H^0}$) and accept the alternative hypothesis ($\mathbf{H^1}$) that there is a statistically significant increase in participants' entrepreneurial self-efficacy (ESE) due to disorienting dilemma following their attending the SHAPE training programme, especially from Round 1 to Round 2. This means that from the research results, the research question, "To what extent does disorienting dilemma (significant experiences) develop ESE?" can be answered, "To a great extent". This is in light of the significant change to participants over the initial 6 weeks of the training programme. This applies to all the aspects of ESE, that is, opportunity identification, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

Participants' ESE increased significantly due to disorientation induced by the programme from weeks 1 to 6. However, there was no significant change from week 7 to week 13. If a close look at the programme is taken, from weeks 1 to 7 the programme used different presenters of various entrepreneurship topics. From week 7 onwards the programme became more oriented towards completing the business model canvass. From these results it can be inferred that this practical aspect did not produce further disorientation to positively influence ESE. It is also possible that the respondents did not complete their business model canvasses thoughtfully, for whatever reasons.

Previous research did not specifically explore the role of disorienting dilemma on ESE. For instance, a number of scholars explored disorienting dilemma as a non-determining beginning to transformative learning (Mälkki, 2012; Nohl, 2015; Roberts, 2013). Other scholars explored disorienting dilemma as a trigger for critical reflection (Jarvis et al., 2003; Mezirow, 2000b; Mezirow and Marsick, 1978).

This study treated disorienting dilemma as "important experience" in the questionnaire. It was anticipated that respondents would not understand the meaning of disorienting dilemma. The decision to substitute 'disorienting dilemma' with 'important experiences' was based on the understanding that disorienting dilemmas are always experiences that are important in one's life, whether or not the respondent appreciates their value. However, this type of questioning imports the reality that some important experiences are not disorienting dilemmas, as disorientation is associated with questioning underlying assumptions (Mezirow, 2000a; Mezirow and Marsick, 1978).

In light of the above discrepancy, future research could refine the measure by evaluating fundamental assumptions held by entrepreneurship participants before the programme and evaluate the same mid and post programme. This would reveal if the programme has led to a change in the respondent's underlying assumptions about entrepreneurship.

6.6 RESEARCH QUESTION 2: TO WHAT EXTENT DOES CRITICAL REFLECTION DEVELOP ESE?

In order to answer the second research question: "**to what extent does critical reflection develop ESE"** this research investigated the following associated goals.

A. To determine if critical reflection develops opportunity identification self-efficacy.

B. To determine if critical reflection develops relationship self-efficacy.

C. To determine if critical reflection develops managerial self-efficacy.

D. To determine if critical reflection develops tolerance self-efficacy.

The relevant hypothesis with regard to **critical reflection** is:

H^2: There is a significant change to participants' entrepreneurial self-efficacy (ESE) due to critical reflection following his/her attending the SHAPE training workshop.

Critical reflection refers to the questioning of one's assumptions about one's own beliefs and interpretations or the basis of one's points of view (Mezirow, 1997). What is being reflected upon are assumptions that one holds about oneself, one's culture, work, ethics, feelings and dispositions (Merriam, 2004). This questioning of assumptions usually occurs in response to perceived contradictions (Kitchenham, 2008). In the questionnaire, critical reflection was termed "critically questioned my beliefs or assumptions about starting or owning a business" in order to simplify the concept for respondents.

This section presents the results of the responses to questions concerning critical r reflection.

6.6.1 Critical Reflection and Opportunity Identification (Rounds 1 - 3)

The first item with regard to critical reflection was**: I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business.** This item was focused directly on the research goal: **To determine if critical reflection develops opportunity identification self-efficacy.**

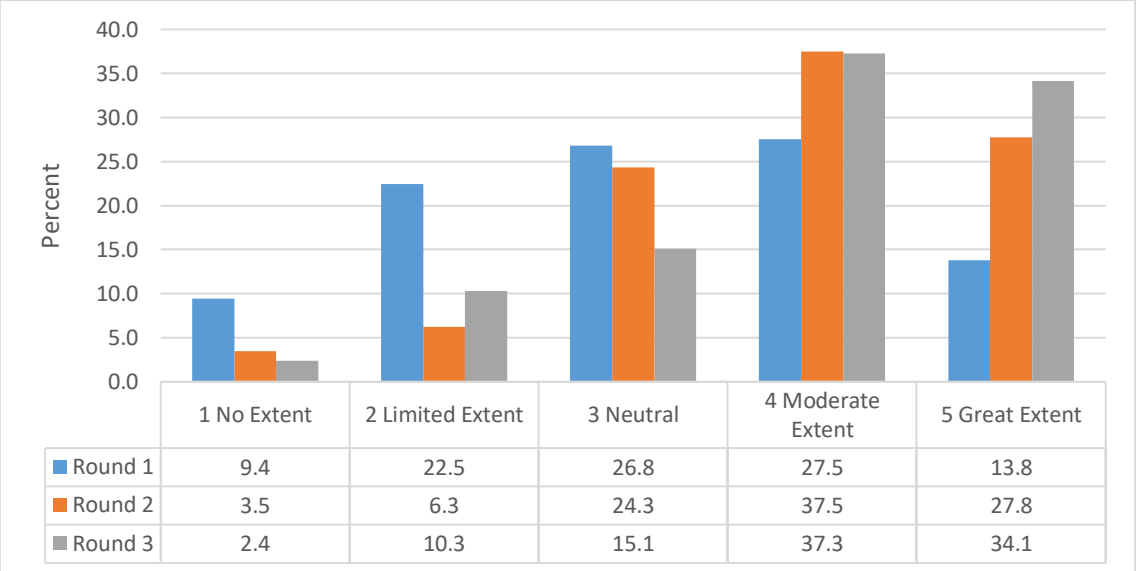
This item attempts to evaluate whether or not a person had critically reflected on exploiting available business opportunities. The results are presented in Table 6.30 below and is from all the respondents in the study.

Table 6.30: Critical reflection and opportunity identification (Rounds 1 - 3)

CR1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	13	9.4	9.4	9.4	5	3.5	3.5	3.5	3	2.4	2.4	2.4
2. Limited Extent	31	22.5	22.5	31.9	9	6.3	6.3	9.8	13	10.3	10.4	12.8
3. Neutral	37	26.8	26.8	58.7	35	24.5	24.5	34.3	19	15.1	15.2	28.0
4. Moderate Extent	38	27.5	27.5	86.2	54	37.8	37.8	72.0	47	37.3	37.6	65.6
5. Great Extent	19	13.8	13.8	100.0	40	28.0	28.0	100.0	43	34.1	34.4	100.0
6. Missing Value									1	0.8		
Total	**138**	**100.0**	**100.0**		**143**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.8 below, which allows for an easier visual presentation.

Figure 6.8: Critical reflection and opportunity identification (Rounds 1 - 3)



From Table 6.30 and Figure 6.8 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 41.3% in Round 1 to 65.3% in Round 2 and 71.4% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 31.9% in Round 1, 9.7 % in Round 2 and slightly increased to 12.8% in Round 3.

Table 6.31 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.31: Critical reflection and opportunity identification (Rounds 1 - 3)

CR1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	7	11.7	11.7	11.7	2	3.3	3.3	3.3	1	1.7	1.7	1.7
2. Limited Extent	16	26.7	26.7	38.3	5	8.3	8.3	11.7	6	10.0	10.0	11.7
3. Neutral	11	18.3	18.3	56.7	15	25.0	25.0	36.7	8	13.3	13.3	25.0
4. Moderate Extent	18	30.0	30.0	86.7	22	36.7	36.7	73.3	26	43.3	43.3	68.3
5. Great Extent	8	13.3	13.3	100.0	16	26.7	26.7	100.0	19	31.7	31.7	100.0
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.31 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 43.3% in Round 1 to 63.4% in Round 2 and up again to 75.0% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 38.3% in Round 1 to 11.7% in Round 2 and Round 3 respectively.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern is the substantial number of neutral responses, especially in Round 2 for both data sets. The substantial number of neutral scores for this question could be interpreted in the context of a significant increase in positive responses. A number of participants who had negative responses initially, chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above this study identified that that the respondents had more opportunities for critical reflection, which increased their opportunity identification self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 46.42% and 18.30% respectively in Rounds 2 and 3. This significant improvement between Rounds 1 and 2 could be as a result of the new learning participants experienced from presenters who taught and also shared their experiences as entrepreneurs.

6.6.2 Critical Refection and Marketing Self-Efficacy

The second item with regard to critical reflection was: **I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice.** This item was focused directly on the research goal: **To determine if critical reflection develops relationship self-efficacy.**

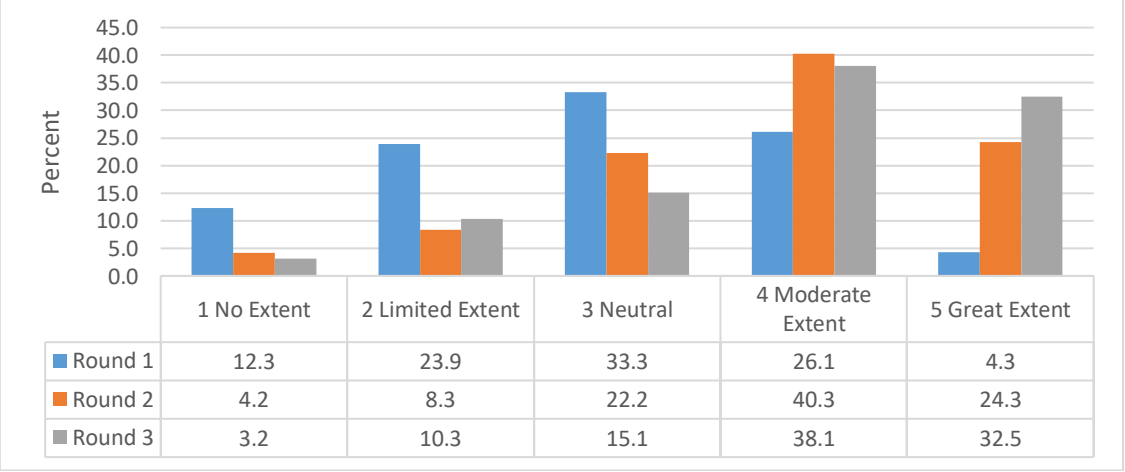
This item attempts to evaluate whether or not a person had critically reflected on available marketing opportunities. The results are presented in Table 6.32 below, which indicates the results from all the respondents in the study.

Table 6.32: Critical reflection and marketing self-efficacy (Rounds 1 - 3)

CR2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	17	12.3	12.3	12.3	6	4.2	4.2	4.2	4	3.2	3.2	3.2
2. Limited Extent	33	23.9	23.9	36.2	12	8.3	8.4	12.6	13	10.3	10.4	13.6
3. Neutral	46	33.3	33.3	69.6	32	22.2	22.4	35.0	19	15.1	15.2	28.8
4. Moderate Extent	36	26.1	26.1	95.7	58	40.3	40.6	75.5	48	38.1	38.4	67.2
5. Great Extent	6	4.3	4.3	100.0	35	24.3	24.5	100.0	41	32.5	32.8	100.0
6. Missing Value					1	0.7			1	0.8		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.9 below, which allows for an easier visual presentation.

Figure 6.9: Critical Reflection and Marketing Self-Efficacy (Rounds 1 - 3)



From Table 6.31 and Figure 6.8 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 30.4% in Round 1 to 64.6% in Round 2 and 70.6% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 36.2% in Round 1 to 12.5% in Round 2 and slightly increased to 13.5% in Round 3.

Table 6.33 below presents the responses from the 60 respondents who participated in all 3 rounds of the study.

Table 6.33: Critical reflection and marketing self-efficacy (Rounds 1 - 3)

CR2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	10	16.7	16.7	16.7	4	6.7	6.7	6.7	1	1.7	1.7	1.7
2. Limited Extent	12	20.0	20.0	36.7	2	3.3	3.3	10.0	7	11.7	11.7	13.3
3. Neutral	20	33.3	33.3	70.0	15	25.0	25.0	35.0	9	15.0	15.0	28.3
4. Moderate Extent	16	26.7	26.7	96.7	25	41.7	41.7	76.7	26	43.3	43.3	71.7
5. Great Extent	2	3.3	3.3	100.0	14	23.3	23.3	100.0	17	28.3	28.3	100.0
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.33 shows a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 30.0% in Round 1 to 65.0% in Round 2 and up again to 71.6% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 36.7% in Round 1 to 10.0% in Round 2 and 13.3% in Round 3.

Based on ….there is not a significant difference in results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern is the substantial number of neutral responses, especially in Rounds 1 and 2 for both data sets. The substantial number of neutral scores for this question could be interpreted in the context of a significant increase in positive responses.

When interpreting the results presented above, it can be argued that respondents had more opportunities for critical reflection, which increased their marketing self-efficacy. This improvement is especially pronounced between rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 116.67% between Rounds 1 and 2 and by 10.15% between Rounds 2 and 3. This significant improvement between Round 1s and 2 could be as a result of the new learning about marketing from presenters who taught and also shared their

experiences as entrepreneurs. The presenters emphasised the prevalence of marketing opportunities, which likely sent the message to the participants that it is easy to find customers.

6.6.3 Critical Refection and Managerial Self-Efficacy

The third item regarding critical reflection was**: I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business.** This item focused directly on the research goal: **To determine if critical reflection develops managerial self-efficacy.**

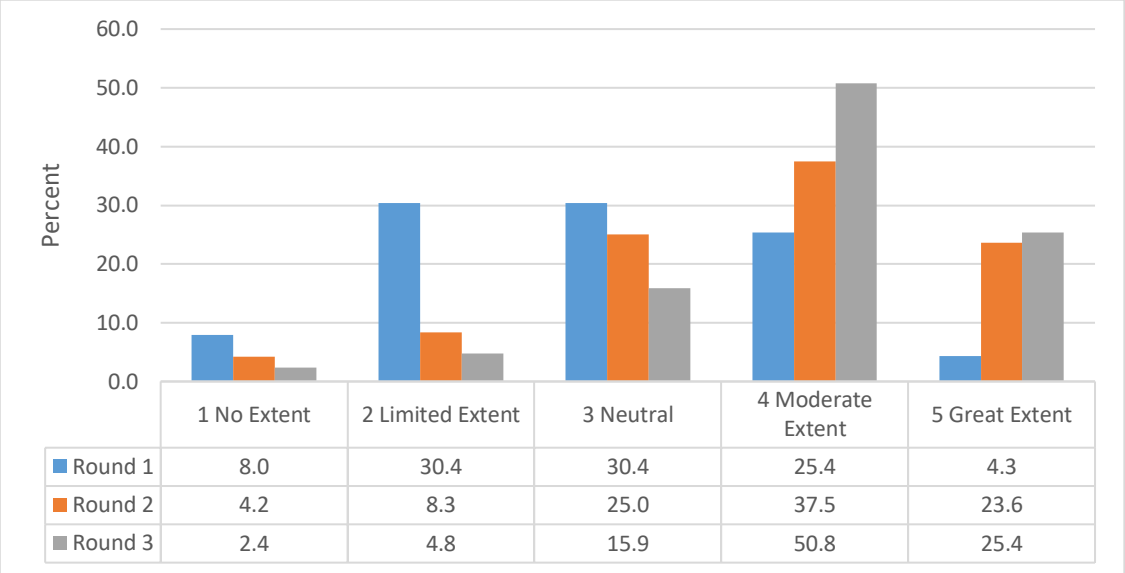
This item is attempting to evaluate whether or not a person had critically reflected on the way in which they could manage their own business. The results from all the respondents in the study are presented in Table 6.34 below.

Table 6.34: Critical reflection and managerial self-efficacy (Rounds 1 - 3)

CR3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	11	8.0	8.1	8.1	6	4.2	4.2	4.2	3	2.4	2.4	2.4
2. Limited Extent	42	30.4	30.9	39.0	12	8.3	8.5	12.7	6	4.8	4.8	7.2
3. Neutral	42	30.4	30.9	69.9	36	25.0	25.4	38.0	20	15.9	16.0	23.2
4. Moderate Extent	35	25.4	25.7	95.6	54	37.5	38.0	76.1	64	50.8	51.2	74.4
5. Great Extent	6	4.3	4.4	100.0	34	23.6	23.9	100.0	32	25.4	25.6	100.0
6. Missing Value	2	1.4			2	1.4			1	0.8		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.10 below, which allows for an easier visual presentation.

Figure 6.10: Critical Reflection and Managerial Self-Efficacy (Rounds 1 - 3)



Based on a comparative analysis of Table 6.34 and Figure 6.9 it is clear that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 29.7% in Round 1 to 61.1% in Round 2 and 76.2% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 39.9% in Round 1 to 12.7% in Round 2 and 7.2% in Round 3.

Table 6.35 below indicates the responses from the 60 respondents who participated in all 3 rounds of the study.

Table 6.35: Critical reflection and managerial self-efficacy (Rounds 1 - 3)

CR3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	4	6.7	6.7	6.7	3	5.0	5.1	5.1	1	1.7	1.7	1.7
2. Limited Extent	20	33.3	33.3	40.0	3	5.0	5.1	10.2	4	6.7	6.7	8.3
3. Neutral	17	28.3	28.3	68.3	21	35.0	33.9	44.1	10	16.7	16.7	25.0
4. Moderate Extent	17	28.3	28.3	96.7	21	35.0	35.6	79.7	31	51.7	51.7	76.7
5. Great Extent	2	3.3	3.3	100.0	12	20.0	20.3	100.0	14	23.3	23.3	100.0
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.35 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 31.6% in Round 1 to 55.0% in Round 2 and up again to 75.0% in Round 3. The percentage of respondents selecting

"No Extent" and "Limited Extent" reduced from 40.0% in Round 1 to 10.2% in Round 2 and 8.3% in Round 3.

Based on analyses above, it can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern is the substantial number of neutral responses, especially in Rounds 1 and 2 for both data sets. The substantial number of neutral scores for this question could be interpreted in the context of a significant increase in positive responses. Some participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that respondents had more opportunities for critical reflection, which increased their belief in their own managerial skills. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 74.05% between Rounds 1 and 2, 36.36% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the new learning about business start-up received from presenters who taught and also shared their experiences as entrepreneurs. The presenters' start-up experiences possibly allowed the respondents to feel more efficacious about their own managerial abilities.

6.6.4 Critical Refection and Tolerance Self-Efficacy

The fourth item regarding critical reflection was**: I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business.** This item was focused directly on the research goal: **To determine if critical reflection develops tolerance self-efficacy.**

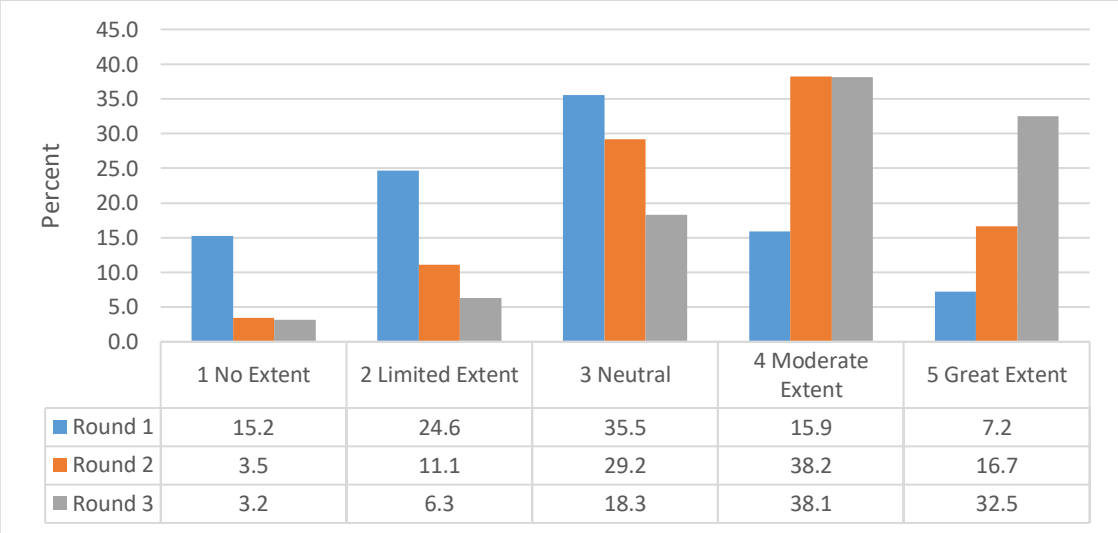
The formulation of the question was designed to evaluate if a person had critically reflected on whether or not they could cope under the stresses and pressure of owning a business. The results are presented in Table 6.36 below, which shows the results from all the respondents in the study.

Table 6.36: Critical reflection and tolerance self-efficacy (Rounds 1 - 3)

CR4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	21	15.2	15.4	15.4	5	3.5	3.5	3.5	4	3.2	3.2	3.2
2. Limited Extent	34	24.6	25.0	40.4	16	11.1	11.3	14.8	8	6.3	6.5	9.7
3. Neutral	49	35.5	36.0	76.5	42	29.2	29.6	44.4	23	18.3	18.5	28.2
4. Moderate Extent	22	15.9	16.2	92.6	55	38.2	38.7	83.1	48	38.1	38.7	66.9
5. Great Extent	10	7.2	7.4	100.0	24	16.7	16.9	100.0	41	32.5	33.1	100.0
6. Missing Value	2	1.4			2	1.4			2	1.6		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.11 below, which allows for a simpler visual presentation.

Figure 6.11: Critical Reflection and Tolerance Self-Efficacy (Rounds 1 - 3)



From Table 6.36 and Figure 6.10 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 23.2% in Round 1 to 54.9% in Round 2 and 70.6% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 40.4% in Round 1 to 14.8% in Round 2 and 9.7% in Round 3.

Table 6.37 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.37: Critical Reflection and Tolerance Self-Efficacy (Rounds 1 - 3)

CR4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1 No Extent	11	18.3	19.0	19.0	4	6.7	6.8	6.8	2	3.3	3.3	3.3
2 Limited Extent	11	18.3	19.0	37.9	5	8.3	8.5	15.3	4	6.7	6.7	10.0
3 Neutral	21	35.0	36.2	74.1	16	26.7	27.1	42.4	13	21.7	21.7	31.7
4 Moderate Extent	11	18.3	19.0	93.1	24	40.0	40.7	83.1	24	40.0	40.0	71.7
5 Great Extent	4	6.7	6.8	100.0	10	16.7	16.9	100.0	17	28.3	28.3	100.0
6 Missing Value	2	3.4			1	1.7						
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.37 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 25.0% in Round 1 to 56.7% in Round 2 and up again to 68.3% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 37.9% in Round 1 to 15.3% in Round 2 and 10.0% in Round 3.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern is the substantial number of neutral responses in all three rounds of both data sets. Even after completing the training programme, 21.7% of the respondents who participated in all three rounds and 18.3% of all the respondents were neutral. It is likely that some people who were negative i.e. “No extent” and “Limited extent” in Round 2 upgraded their tolerance self-efficacy to positive. This analysis is based on the understanding that there were fewer people with negative evaluation in Round 3 than in Round 2. The substantial number of neutral scores for this question could therefore be interpreted in the context of a significant increase in positive responses. Some participants who had negative responses initially, chose a neutral response instead of moving up to positive or remaining negative.

Considering the results presented above, it can be argued that the respondents had more opportunities for critical reflection, which increased their tolerance self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 126.8% between Rounds 1 and 2 and 20.5% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the new learning about business from presenters who taught and also shared their experiences as entrepreneurs. The presenters attempted to show that having a successful business is a result of having a certain sets of skills, which likely made respondents feel that

entrepreneurship was not as stressful as they had imagined, thus increasing their tolerance self-efficacy.

6.6.5 Examples of Critical Refection

The research question was**: If you have, what made you critically question your beliefs/ assumptions about starting or owning a business?**

This was an open-ended question designed to allow respondents to specify the experiences that made them question their beliefs or assumptions about business. After receiving the responses, the researcher read through them twice and created categories and codes to convert the long responses to numbers. Detailed results are presented in Table 6.38.

Table 6.38: Experiences that Trigger Critical Reflection (Rounds 1 - 3)

CR5	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. 1 Previous experience (work or business)	3	2.2	4.5	4.5	5	3.4	6.5	6.5	2	1.6	0.3	0.3
2. Bad financial situation (personal, family or close friend/ relative)	2	1.4	3.0	7.6	4	2.7	5.2	11.7		0.0	0.0	0.3
3. Desire for Freedom/ Independence (personal choice, self-expression)	7	5.1	10.6	18.2	12	8.2	15.6	27.3	3	2.4	0.4	0.6
4. Fear of failure (seen others fail, am I good enough, will people buy, failed before)	23	16.7	34.8	53.0	16	11.0	20.8	48.1	9	7.1	1.1	1.8
5. Fear of future unemployment in future (future looks bleak)	7	5.1	10.6	63.6	6	4.1	7.8	55.8	4	3.2	0.5	2.3
6. Business opportunities perceived	12	8.7	18.2	81.8	13	8.9	16.9	72.7	7	5.6	0.9	3.2
7. Family/ Friend in business	3	2.2	4.5	86.4	2	1.4	2.6	75.3	2	1.6	0.3	3.4
8. Shape program	0	0.0	0.0	86.4	6	4.1	7.8	83.1	4	3.2	0.5	4.0
9. Other	9	6.5	13.6	100.0	13	8.9	16.9	100.0	10	7.9	1.3	5.2
10. Missing Value	72	52.2			69	47.3			85	67.5	10.845	
Total	**138**	**100.0**	**100.0**		**146**	**100.0**	**100.0**		**126**	**100.0**	**16.1**	

From Table 6.38 above it can be seen that the items identified by most participant as being of importance were: in Round 1 "Fear of failure" (23 respondents) and "Business opportunities perceived" (12 respondents). In Round 2 the most important experiences were "Fear of failure" (16 respondents) and "Business opportunities perceived" (13 respondents). In Round 3 the most important experiences were "Fear of failure" (9 respondents) and "Business opportunities perceived" (8 respondents). A substantial number of respondents did not complete this open ended question; 72 (52.2%) in Round 1, 69 (47.3%) in Round 2 and 85 67.5%) in Round 3. It can be seen that fear of failure is a dominant theme is all rounds of the study.

The results presented above imply that necessity remains a major driver of students considering entrepreneurship. However, the desire to exploit perceived opportunities also ranks highly. This implies that people often explore entrepreneurship as some sort of insurance against unemployment.

6.6.6 Critical Reflection - Overall Descriptive Statistics

In order to present a summary of critical reflection, aggregate scores were calculated. The aggregate scores are presented in Table 6.39 below.

Table 6.39: Critical reflection descriptive statistics

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Critical Reflection (All Respondents)	134	2.897	0.924	141	3.683	0.877	124	3.903	0.907
Critical Reflection (All Rounds Respondents)	60	2.881	0.970	60	3.658	0.935	60	3.875	0.881

From the table above it is clear that there was a general increase in means from Rounds 1 to 3 for critical reflection based on aggregate scores. To evaluate the level of change, percentage increases were calculated and the results are presented in Table 6.40 below.

Table 6.40: Percentage Increases In Critical Reflection Means (Rounds 1 - 3)

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Critical Reflection (All Respondents)	27.1%	34.7%	6.0%
Critical Reflection (All Rounds Respondents)	27.0%	34.5%	5.9%

From the table above it can be seen that although there were significant increases in the means from Round 1 to Round 3, the change from Round 1 to Round 2 was higher than the increase

from Rounds 2 to 3. When considering the scores for the participants in all the rounds, there was a much smaller increase in scores between Rounds 2 and 3.

To gain a better understanding of the descriptive scores, further analysis was performed of the respondents to all rounds by gender. The results are shown in Tables 6.41 and 6.42 and Figure 6.12 below.

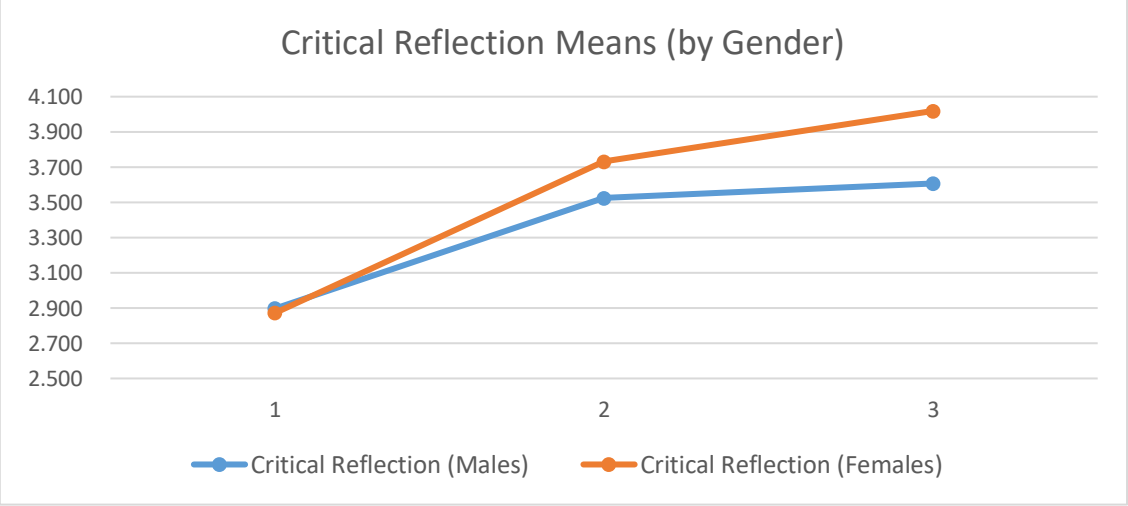
Table 6.41: Critical Reflection Descriptive Statistics By Gender

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Critical Reflection (Males)	21	2.897	1.001	21	3.524	1.143	21	3.607	1.020
Critical Reflection (Females)	39	2.872	0.966	39	3.731	0.810	39	4.019	0.745
Critical Reflection (Overall)	60	2.881	0.970	60	3.658	0.935	60	3.875	0.881

Table 6.42: Percentage increases in critical reflection means by gender

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Critical Reflection (Males)	21.6%	24.5%	2.4%
Critical Reflection (Females)	29.9%	40.0%	7.7%
Critical Reflection (Overall)	27.0%	34.5%	5.9%

Figure 6.12: Changes in Disorienting Dilemma By Gender



From the tables and figure above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was significantly higher than the increase from Round 2 to Round 3 for both genders. The increases in means is slightly higher for females than males. It should however be highlighted that the sample of males was too small at 21 participants in all rounds of the study to draw any meaningful conclusions.

For further analysis the critical reflection hypothesis was tested. The process followed in hypothesis testing was described in section 6.3.6 above. The results of the ESE and critical reflection hypothesis are presented below.

6.6.7 ESE and Critical Reflection (H^2)

The hypothesis being tested in this section was:

H2: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **critical reflection** following participants attending the SHAPE training workshop.

After running multivariate tests to evaluate the significance of the change, the results are presented in Table 6.43.

Table 6.43: Multivariate Tests - Critical Reflection (Rounds 1 - 3)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Critical Reflection	Pillai's Trace	0.437	20.564	2.000	53.000	0.000	0.437	41.128	1.000
	Wilks' Lambda	0.563	20.564	2.000	53.000	0.000	0.437	41.128	1.000
	Hotelling's Trace	0.776	20.564	2.000	53.000	0.000	0.437	41.128	1.000
	Roy's Largest Root	0.776	20.564	2.000	53.000	0.000	0.437	41.128	1.000

There was a statistically significant increase in ESE due to critical reflection after the SHAPE training program, Wilk's $\mathbf{\Lambda} = 0.563$, $F(2, 53.0) = 20.564$, $p < 0.05$, partial $\eta^2 = 0.437$.

As the Wilk's Lambda and other multivariate tests were significant, Mauchly's test of sphericity was run to evaluate whether or not variances of differences of all pairs of groups are equal. The results are presented in Table 6.44 below.

Table 6.44: Mauchly's Test of Sphericity – Critical Reflection (Rounds 1 - 3)

Within subjects Effect	Mauchly's W	Approx Chi-Square	Df	Sig	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Critical Reflection	0.881	6.727	2	0.035	0.893	0.922	0.500

From the table above it can be seen that Mauchly's test indicated that the assumption of sphericity has been violated ($\chi^2(2) = 0.881$, $p = 0.035$). Repeated measures ANOVA is sensitive to sphericity

violation and we therefore check the Greenhouse-Geisser and Huynh-Feldt corrections (Grande, 2016b). If the Epsilon values are greater than 0.75, as in this case, we need to interpret the Huynh-Feldt value in the tests of within subjects effects table below (Grande, 2016b), which is statistically significant at $p < 0.05$ in Table 6.45.

Table 6.45: Tests of Within Subjects Effects – Critical Reflection (Rounds 1 - 3)

Source		Sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
CRIT_REFLEC	Spheriity assumed	33.160	2	16.580	28.085	.000	.342	56.171	1.000
	Greenhouse-Geisser	33.160	1.787	18.556	28.085	.000	.342	50.188	1.000
	Huynh-Feldt	33.160	1.844	17.982	28.085	.000	.342	51.791	1.000
	Lower Bound	33.160	1.000	33.160	28.085	.000	.342	28.085	.999
		33.160			28.085	.000			
Error (CRIT_REFLE)	Spheriity assumed	63.757	108	.590					
	Greenhouse-Geisser	63.757	96.497	.661					
	Huynh-Feldt	63.757	99.579	.640					
	Lower Bound	63.757	54.000	1.181					

After correction of sphericity, the tests of within subjects effects were performed and are presented in Table 6.46 below.

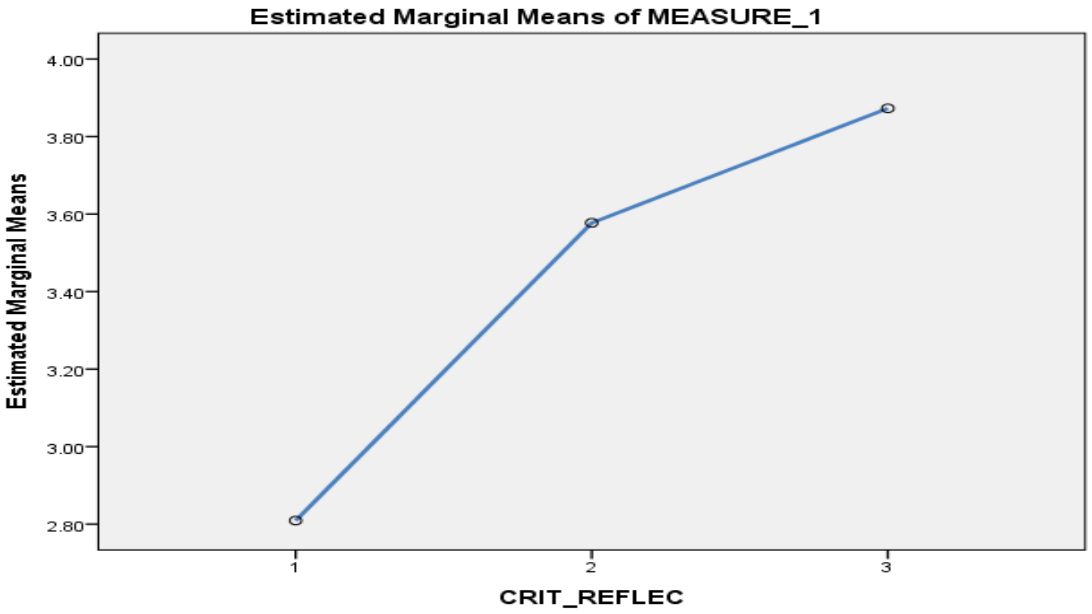
Table 6.46: Tests of Within Subjects Effects – Critical Reflection (Rounds 1 - 3)

Source	Sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intecept	1929.564	1.000	1929.564	1440.534	0.000	0.964	1440.534	1.000
Error	72.332	54.000	1.339					

a. Computed using alpha = .05

There were statistically significant within subjects effects of critical reflection on ESE scores overall, ($F(1, 54) = 1929.564$, $p < 0.05$, $\eta_p^2 = 0.964$). This is explained further by the profile plots in Figure 6.13 below.

Figure 6.13: Profile Plots- Critical Reflection (Rounds 1 - 3)



The profile plots in the graph above indicate that the mean for ESE increased steeply due to critical reflection from Round 1 to Round 2 and more or less levelled off between Rounds 2 and 3.

To evaluate the significance of the changes we examine the results of the Bonferroni post hoc test. These are presented in the pairwise comparison in Table 6.47 below.

Table 6.47: Pairwise Comparisons: Critical Reflection (Rounds 1 - 3)

Critical Reflection		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.778*	0.141	0.000	-1.125	-0.431
1	3	-.994*	0.166	0.000	-1.403	-0.586
2	3	-0.217	0.120	0.226	-0.512	0.078

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Post hoc comparisons using the Bonferroni correction indicated that the mean score from Round 1 (M = 2.897, SD = 0.924) was significantly different from Round 2 (M = 3.683, SD = 0.877) and Round 3 (M = 3.903, SD = 0.907). However, the mean for Round 2 (M = 3.683, SD = 0.877) was not significantly different from that of Round 3 (M = 3.903, SD = 0.907).

These findings lead us to reject the null hypothesis and accept the alternative hypothesis that there is a significant change to participants' entrepreneurial self-efficacy (ESE) due to critical reflection following the participants attending the SHAPE training workshop, especially from week 1 to week 6. These results mean that the research question, "**To what extent does critical reflection develop ESE?**" can be answered, 'to a great extent from week 1 to week 6'. This is in light of the significant changes reported by participants during that period of the training programme. This is for all aspects of ESE, namely opportunity identification, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

Participants' ESE increased significantly due to critical reflection induced by the programme from weeks 1 to 6. However, there was no significant change from week 7 to week 13. These changes could have been due to the structure of the SHAPE programme, as discussed in section 6.3.7.

Previous research did not specifically explore the influence of critical reflection on ESE. It did however distinguish process reflection from content reflection. Content reflection is described as thinking about experience (Mezirow, 1990), while process reflection is about exploring problem solving strategies (Merriam, 2004; Williams, 2000).

This study asked respondents if they "*have recently critically questioned [their] beliefs or assumptions about starting or owning a business...*" This question was intended to explore if the programme assisted respondents to elicit problem solving strategies (process reflection) with regard to ESE. The results were significant, as already discussed.

Future research could explore inducing critical reflection and ascertaining the impact on ESE. The goal of such a study would be to ascertain if participants can be helped to perform critical reflection of their assumptions regarding being an entrepreneur, which would help identify personal factors influencing attitude towards entrepreneurship.

6.7 RESEARCH QUESTION 3: TO WHAT EXTENT DOES REFLECTIVE DISCOURSE DEVELOP ESE?

In order to answer the third research question; **to what extent does reflective discourse develop ESE,** this research investigated the following respective goals:

A. To determine if reflective discourse develops opportunity identification self-efficacy.

B. To determine if reflective discourse develops relationship self-efficacy.

C. To determine if reflective discourse develops managerial self-efficacy.

D. To determine if reflective discourse develops tolerance self-efficacy.

The relevant hypothesis (H^3) dealing with **reflective discourse** is:

H^3: There is a significant change to participants' entrepreneurial self -efficacy (ESE) due to reflective discourse following his/ her attending the SHAPE training workshop.

Rational discourse is used to question how truthful and appropriate is one's thinking in relation to norms (Mezirow, 1991). The discourse is rational in the sense that a person participates with an open mind, learning to listen with empathy, seeking common ground and not judging prematurely (Mezirow, 2003). In the questionnaire critical reflection was termed "in depth discussion with someone in which I questioned the way I think".

This section presents the results from questions regarding **reflective discourse**.

6.7.1 Reflective Discourse and Opportunity Identification

The first item on reflective discourse was: **I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business.** This item was focused directly at the research goal: **To determine if reflective discourse develops opportunity identification self-efficacy.**

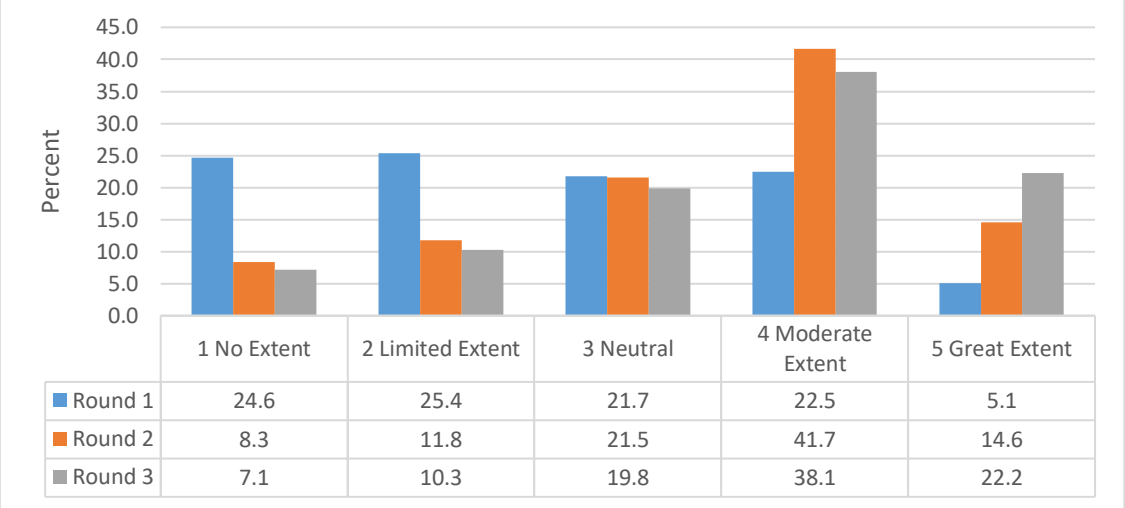
This item is attempting to evaluate whether or not a person has had in-depth discourse on exploiting available business opportunities. The results are presented in Table 6.48 below, which presents the results from all the respondents in the study.

Table 6.48: Reflective Discourse and Opportunity Identification (Rounds 1 - 3)

RD1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	34	24.6	24.8	24.8	12	8.3	8.5	8.5	9	7.1	7.3	7.3
2. Limited Extent	35	25.4	25.5	50.4	17	11.8	12.1	20.6	13	10.3	10.6	17.9
3. Neutral	30	21.7	21.9	72.3	31	21.5	22.0	42.6	25	19.8	20.3	38.2
4. Moderate Extent	31	22.5	22.6	94.9	60	41.7	42.6	85.1	48	38.1	39.0	77.2
5. Great Extent	7	5.1	5.1	100.0	21	14.6	14.9	100.0	28	22.2	22.8	100.0
6. Missing Value	1	0.7			3	2.1			3	2.4		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.14 below, which allows a simpler visual presentation.

Figure 6.14: Reflective Discourse and Opportunity Identification (Rounds 1 - 3)



From Table 6.48 and Figure 6.12 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 27.5% in Round 1 to 56.3% in Round 2 and 60.3% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 50.4% in Round 1 to 20.6% in Round 2 and 17.9% in Round 3.

Table 6.49 below indicates the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.49: Reflective Discourse and Opportunity Identification (Rounds 1 - 3)

RD1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	17	28.3	28.8	28.8	8	13.3	13.6	13.6	2	3.3	3.3	3.3
2. Limited Extent	15	25.0	25.4	54.2	6	10.0	10.2	23.7	7	11.7	11.7	15.0
3. Neutral	11	18.3	18.6	72.9	9	15.0	15.3	39.0	13	21.7	21.7	36.7
4. Moderate Extent	12	20.0	20.3	93.2	27	45.0	45.8	84.7	23	38.3	38.3	75.0
5. Great Extent	4	6.7	6.8	100.0	9	15.0	15.1	100.0	15	25.0	25.0	100.0
6. Missing Value	1	1.7			1	1.7						
Total	**60**	**100.0**	**99.9**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.49 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 26.7% in Round 1 to 60.0% in Round 2 and up again to 63.3% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 54.2% in Round 1 to 23.7% in Round 2 and 15.0% in Round 3.

It can be seen that there is not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern is the substantial number of neutral responses in all three rounds of both data sets. Even after completing the training programme, 21.7% of the respondents who participated in all rounds and 20.3% for all the respondents were neutral. It is likely that some people who were negative i.e. “No extent” and “Limited extent” in Round 2 upgraded their tolerance self-efficacy to positive. This analysis is based on the understanding that there were fewer people with negative evaluations in Round 3 than in Round 2. The substantial number of neutral scores for this question could therefore be interpreted in the context of a significant increase in positive responses. A number of participants who had negative responses initially, chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities for reflective discourse, which increased their opportunity identification self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 124.7% between Rounds 1 and 2,and only 5.5% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the excitement generated by the interaction between the participants during which they shared their experiences. During that period, participants may have shared their entrepreneurial experiences with one another. It is however surprising that the increase in opportunity identification self-efficacy did not increase significantly between Rounds 2 and 3, given that there was so much discussion of business ideas between those periods.

6.7.2 Reflective Discourse and Marketing Self-Efficacy

The second item regarding reflective discourse was: **I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice.** This item was focused directly on the research goal: **To determine if reflective discourse develops relationship self-efficacy.**

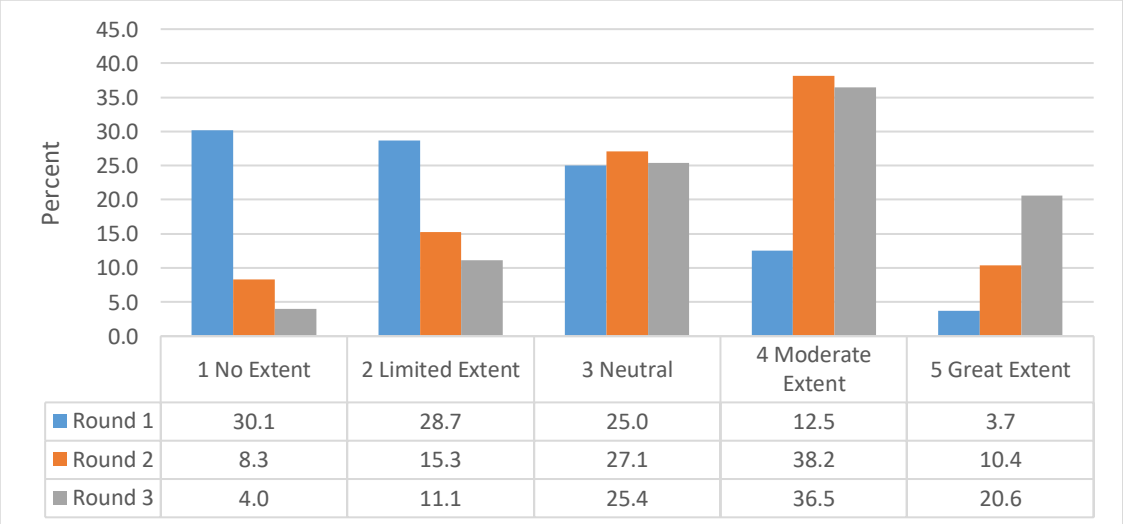
This item is attempting to evaluate whether or not a person had discussed with someone the way in which to market and exploit available business opportunities. The results are presented in Table 6.50 below, which includes the results from all the respondents in the study.

Table 6.50: Reflective Discourse and Marketing Self-Efficacy (Rounds 1 - 3)

RD2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	41	29.7	30.1	30.1	12	8.3	8.4	8.4	5	4.0	4.1	4.1
2. Limited Extent	39	28.3	28.7	58.8	22	15.3	15.4	23.8	14	11.1	11.4	15.4
3. Neutral	34	24.6	25.0	83.8	39	27.1	27.3	51.0	32	25.4	26.0	41.5
4. Moderate Extent	17	12.3	12.5	96.3	55	38.2	38.5	89.5	46	36.5	37.4	78.9
5. Great Extent	5	3.6	3.7	100.0	15	10.4	10.5	100.0	26	20.6	21.1	100.0
6. Missing Value	2	1.4			1	0.7			3	2.4		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.15 which allows for an easier visual presentation.

Figure 6.15: Reflective Discourse and Marketing Self-Efficacy (Rounds 1 - 3)



From Table 6.50 and Figure 6.15 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 15.9% in Round 1 to 48.6% in Round 2 to 58.5% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 58.8% in Round 1 to 15.4% in Round 2 and 15.4% in Round 3.

Table 6.51 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.51: Reflective Discourse and Marketing Self-Efficacy (Rounds 1 - 3)

RD2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	18	30.0	30.5	30.5	8	13.3	13.3	13.3	2	3.3	3.3	3.3
2. Limited Extent	20	33.3	33.9	64.4	8	13.3	13.3	26.7	6	10.0	10.0	13.3
3. Neutral	13	21.7	22.0	86.4	14	23.3	23.3	50.0	14	23.3	23.3	36.7
4. Moderate Extent	7	11.6	11.9	98.3	22	36.7	36.7	86.7	25	41.7	41.7	78.3
5. Great Extent	1	1.7	1.7	100.0	8	13.4	13.4	100.0	13	21.7	21.7	100.0
6. Missing Value	1	1.7										
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.51 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 13.3% in Round 1 to 50.1% in Round 2 and up again to 63.4% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 64.2% in Round 1 to 26.7% in Round 2 and 13.3% in Round 3.

It can be seen that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in Rounds 1 and 2. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2. A number of participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results presented above, it can be argued that the respondents had more opportunities for reflective discourse, which increased their marketing self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 276.7% between Rounds 1 and 2 and by only 26.5% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the excitement generated by interaction between the participants during which

they shared their experiences. During that period, participants may have shared their entrepreneurial experiences with one another.

6.7.3 Reflective Discourse and Managerial Self-Efficacy

The third item regarding reflective discourse was: **I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business.** This item was focused directly on the research goal: **To determine if reflective discourse develops managerial self-efficacy.**

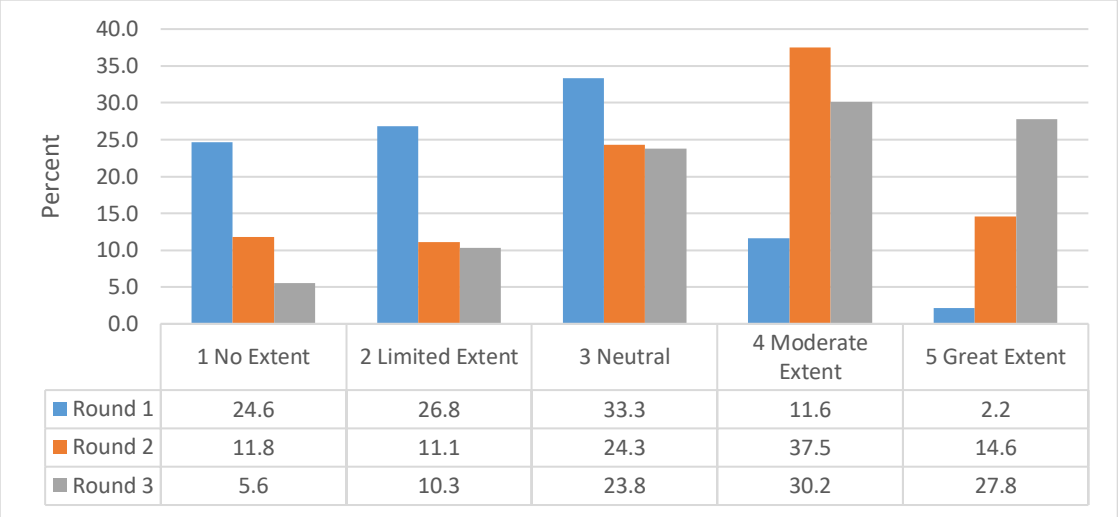
This item is attempting to evaluate whether or not a person had discussed with someone about exploiting available business opportunities. The results are presented in Table 6.52 below, which includes the results from all the respondents in the study.

Table 6.52: Critical Reflection and Managerial Self-Efficacy (Rounds 1 - 3)

RD3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	34	24.6	25.0	25.0	17	11.8	11.9	11.9	7	5.6	5.7	5.7
2. Limited Extent	37	26.8	27.2	52.2	16	11.1	11.2	23.1	13	10.3	10.6	16.3
3. Neutral	46	33.3	33.8	86.0	35	24.3	24.5	47.6	30	23.8	24.4	40.7
4. Moderate Extent	16	11.6	11.8	97.8	54	37.5	37.8	85.3	38	30.2	30.9	71.5
5. Great Extent	3	2.2	2.2	100.0	21	14.6	14.7	100.0	35	27.8	28.5	100.0
6. Missing Value	2	1.4			1	0.7			3	2.4		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.16 below, which allows for an easier visual presentation.

Figure 6.16: Reflective Discourse and Managerial Self-Efficacy (Rounds 1 - 3)



From Table 6.52 and Figure 6.16 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 13.8% in Round 1 to 52.1% in Round 2 and 57.9% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 52.2% in Round 1 to 23.1% in Round 2 and 16.3% in Round 3.

Table 6.53 below indicates responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.53: Critical Reflection and Managerial Self-Efficacy (Rounds 1 - 3)

RD3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	14	23.3	24.1	24.1	10	16.7	16.7	16.7	2	3.3	3.3	3.3
2. Limited Extent	16	26.7	27.6	51.7	7	11.7	11.7	28.3	7	11.7	11.7	15.0
3. Neutral	21	35.0	36.2	87.9	12	20.0	20.0	48.3	13	21.7	21.7	36.7
4. Moderate Extent	6	10.0	10.3	98.3	22	36.6	36.7	85.0	21	35.0	35.0	71.7
5. Great Extent	1	1.7	1.7	100.0	9	15.0	15.0	100.0	17	28.3	28.3	100.0
6. Missing Value	2	3.3										
Total	**60**	**100.0**	**99.9**		**60**	**100.0**	**100.1**		**60**	**100.0**	**100.0**	

Table 6.53 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 11.7% in Round 1 to 51.6% in Round 2 and up again to 63.3% in Round 3. The percentage of respondents selecting

"No Extent" and "Limited Extent" reduced from 51.7% in Round 1 to 28.3% in Round 2 and 15.0% in Round 3.

It can be seen that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in Rounds 1 and 2. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2. A number of participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities for reflective discourse, which increased their managerial self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 341.0% between Rounds 1 and 2 and only 22.6% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the excitement generated by the interaction between the participants during which they shared their experiences. During that period, participants may have shared their entrepreneurial experiences with one another.

6.7.4 Reflective Discourse and Tolerance Self-Efficacy

The fourth item regarding reflective discourse was: **I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business.** This item focused directly on the research goal: **To determine if reflective discourse develops tolerance self-efficacy.**

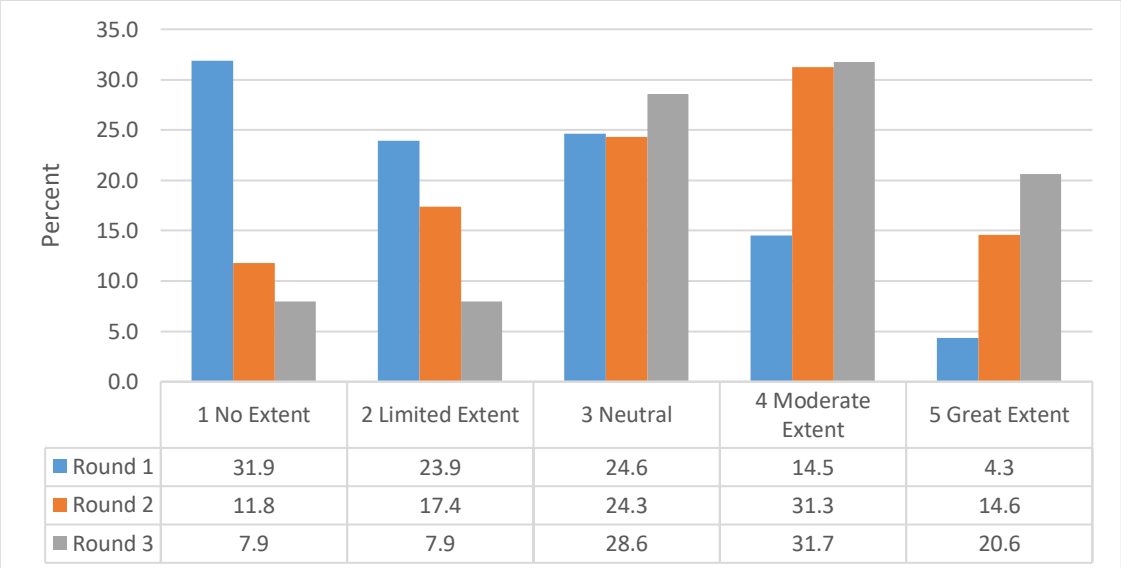
This item was an attempt to evaluate whether or not a person had discussed with someone about exploiting available business opportunities. The results are presented in Table 6.54, which includes the results from all the respondents in the study.

Table 6.54: Critical Reflection and Tolerance Self-Efficacy (Rounds 1 - 3)

RD4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	44	31.9	32.1	32.1	17	11.8	11.9	11.9	10	7.9	8.2	8.2
2. Limited Extent	33	23.9	24.1	56.2	25	17.4	17.5	29.4	10	7.9	8.2	16.4
3. Neutral	34	24.6	24.8	81.0	35	24.3	24.5	53.8	36	28.6	29.5	45.9
4. Moderate Extent	20	14.5	14.6	95.6	45	31.3	31.5	85.3	40	31.7	32.8	78.7
5. Great Extent	6	4.3	4.4	100.0	21	14.6	14.7	100.0	26	20.6	21.3	100.0
6. Missing Value	1	0.7			1	0.7			4	3.2		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.17 below, which allows for an easier visual presentation.

Figure 6.17: Reflective Discourse and Managerial Self-Efficacy (Rounds 1 - 3)



From Table 6.54 and Figure 6.17 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 18.8% in Round 1 to 45.8% in Round 2 and 52.4% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 56.2% in Round 1 to 29.4% in Round 2 and 16.4% in Round 3.

Table 6.55 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.55: Critical Reflection and Tolerance Self-Efficacy (Rounds 1 - 3)

RD4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	18	30.0	30.5	30.5	8	13.3	13.3	13.3	1	1.7	1.7	1.7
2. Limited Extent	12	20.0	20.3	50.8	11	18.3	18.3	31.7	6	10.0	10.2	11.9
3. Neutral	18	30.0	30.5	81.4	12	20.0	20.0	51.7	20	33.3	33.9	45.8
4. Moderate Extent	7	11.7	11.9	93.2	21	35.1	35.1	86.7	20	33.3	33.9	79.7
5. Great Extent	4	6.7	6.8	100.0	8	13.3	13.3	100.0	12	20.0	20.3	100.0
6. Missing Value	1	1.6							1	1.7		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.55 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 18.4% in Round 1 to 48.4% in Round 2 and up again to 53.3% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 50.8% in Round 1 to 31.7% in Round 2 and 11.9% in Round 3.

From the above analysis, it can be observed that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in all rounds. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2. A number of participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities for reflective discourse, which increased their tolerance self-efficacy. This improvement is especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 163.0% between Rounds 1 and 2 and only 10.12% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the excitement generated by the interaction between the participants during which they shared their experiences. During that period, participants may have felt they could be more tolerant to the stresses that come with owning and managing a business.

6.7.5 Reflective Discourse - Overall Descriptive Statistics

To gain a summarised understanding of reflective discourse, the aggregate scores were calculated. The aggregate scores are presented in Table 6.56 below.

Table 6.56: Reflective Discourse Descriptive Statistics

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Reflective Discourse (All Respondents)	135	2.402	0.985	141	3.314	1.010	122	3.582	1.018
Reflective Discourse (All Rounds Respondents)	60	2.386	0.996	60	3.249	1.121	60	3.688	0.927

From the table above it is clear that there was a general increase in means from Round 1 up to Round 3 for reflective discourse, based on aggregate scores. To evaluate the level of change, percentage increases were calculated and the results are presented in Table 6.57 below.

Table 6.57: Percentage Increases in Reflective Discourse Means (Rounds 1 - 3)

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Reflective Discourse (All Respondents)	38.0%	49.1%	8.1%
Reflective Discourse (All Rounds Respondents)	36.2%	54.6%	13.5%

From the table above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was higher than the increase from Rounds 2 to 3. When considering the scores for participants in all rounds, there was also a reasonably high increase in the scores (13.5%) between Rounds 2 and 3.

To gain a better understanding of the descriptive scores, further analysis was performed on the respondents to all rounds by gender. The results are depicted in Tables 6.58 and 6.59 and Figure 6.18 below.

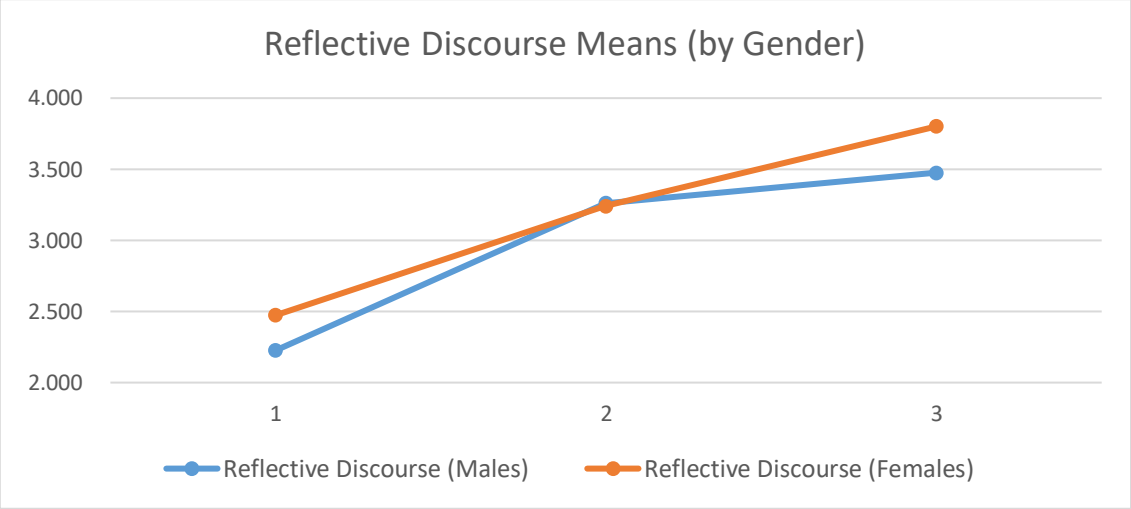
Table 6.58: Reflective Discourse - Descriptive Statistics by Gender

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Reflective Discourse (Males)	21	2.226	0.932	21	3.262	1.192	122	3.476	1.000
Reflective Discourse (Females)	39	2.474	1.031	39	3.242	1.096	60	3.801	0.878
Reflective Discourse (Overall)	60	2.386	0.996	60	3.249	1.121		3.688	0.927

Table 6.59: Percentage Increases in Reflective Discourse Means by Gender

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Reflective Discourse (Males)	46.5%	56.1%	6.6%
Reflective Discourse (Females)	31.0%	53.7%	17.3%
Reflective Discourse (Overall)	36.2%	54.6%	13.5%

Figure 6.18: Changes in Reflective Discourse by Gender



From the tables and figure above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was significantly higher than the increase from Rounds 2 to 3 for both genders. In fact, the increases in means are slightly higher for males than for females for Rounds 1 to 2 and vice versa for Rounds 2 to 3. It should however be highlighted that the sample of males was too small at 21 participants in all rounds of the study to draw any meaningful conclusions.

For further analysis, the reflective discourse hypothesis was tested. The process followed in hypothesis testing was described in section 6.3.6 above. The results of the ESE and reflective discourse hypothesis are presented below.

6.7.6 ESE and Reflective Discourse (H^3)

The hypothesis being tested in this section was:

H^3: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **reflective discourse** following participant attending the SHAPE training workshop.

After running multivariate tests to evaluate the significance of the change, the results are presented in Table 6.60.

Table 6.60: Multivariate Tests Reflective - Discourse (Rounds 1 - 3)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Reflective Discourse	Pillai's Trace	0.613	42.012	2.000	53.000	0.000	0.613	84.024	1.000
	Wilks' Lambda	0.387	42.012	2.000	53.000	0.000	0.613	84.024	1.000
	Hotelling's Trace	1.585	42.012	2.000	53.000	0.000	0.613	84.024	1.000
	Roy's Largest Root	1.585	42.012	2.000	53.000	0.000	0.613	84.024	1.000

There was a statistically significant increase in ESE due to reflective discourse after the SHAPE training program, Wilk's $\mathbf{\Lambda} = 0.387$, $F(2, 53.0) = 42.012$, $p < 0.05$, partial $\boldsymbol{\eta}^2 = 0.613$.

As the Wilk's Lambda and other multivariate tests were significant, Mauchly's test of sphericity was run to evaluate whether or not the variances of differences of all pairs of groups are equal (Grande, 2016). The results are shown in Table 6.61 below.

Table 6.61: Mauchly's Test of Sphericity – Reflective Discourse (Rounds 1 - 3)

Within subjects Effect	Mauchly's W	Approx Chi-Square	df	Sig	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Reflective Discourse	0.983	0.928	2	0.629	0.983	1.000	0.500

Mauchly's test of sphericity indicated that the assumption of sphericity had have not been violated ($\chi^2(2) = 0.983$, $p = 0.629$), therefore the tests of within subjects effects were performed and the results are presented in Table 6.62 below.

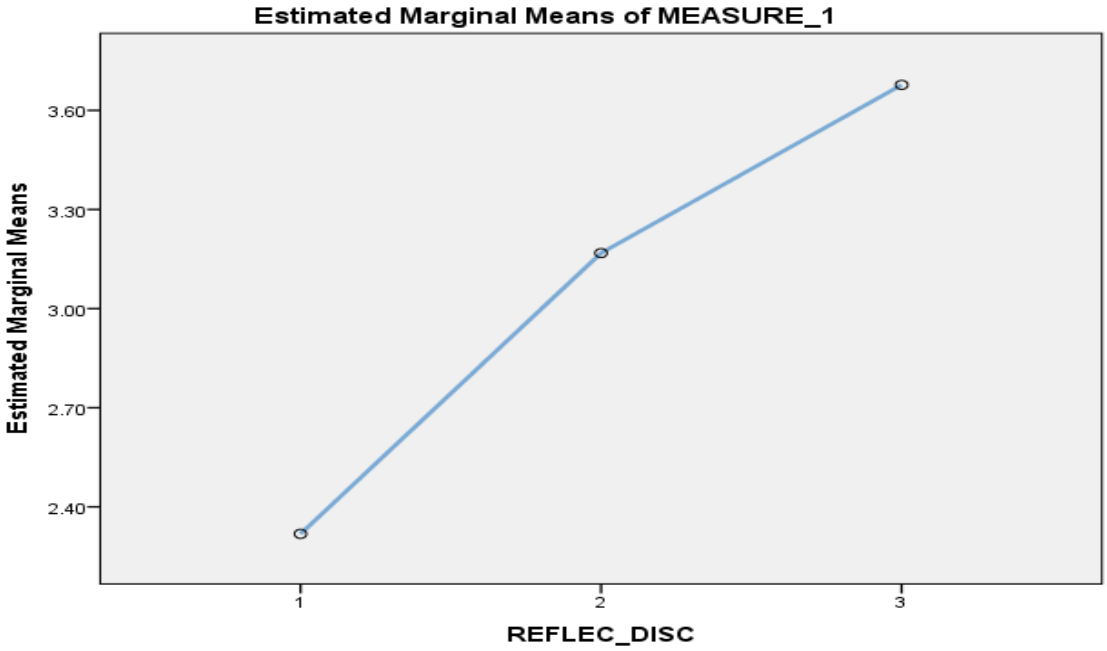
Table 6.62: Tests of Within Subjects Effects – Reflective Discourse (Rounds 1 - 3)

Source	Sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	1539.491	1.000	1539.491	786.365	0.000	0.936	786.365	1.000
Error	105.717	54.000	1.958					

a. Computed using alpha = .05

There were significant within subjects effects of reflective discourse on ESE scores overall, $F(1, 54) = 1539.491$, $p < 0.05$, $\boldsymbol{\eta}_p^2 = 0.936$). This is explained further by the profile plots in Figure 6.19 below.

Figure 6.19: Profile Plots- Reflective Discourse (Rounds 1 - 3)



The profile plots in the graph above indicate that the mean for ESE increased steeply due to reflective discourse from Round 1 to Round 2 and not as steeply between Rounds 2 and 3.

To evaluate the significance of the changes, the results of the Bonferroni post hoc test are examined. These are presented in the pairwise comparison in Table 6.63 below.

Table 6.63: Pairwise Comparisons: Reflective Discourse (Rounds 1 - 3)

Reflective Discourse		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.838*	0.126	0.000	-1.149	-0.527
1	3	-1.297*	0.146	0.000	-1.657	-0.936
2	3	-.459*	0.141	0.006	-0.807	-0.111

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Post hoc comparisons using the Bonferroni correction indicated that the mean score from Round 1 (M = 2.402, SD = 0.985) was significantly different from Round 2 (M = 3.313, SD = 1.010) and Round 3 (M = 3.582, SD = 1.018). The mean for Round 2 (M = 3.313, SD = 1.010) was also significantly different from that of Round 3 (M = 3.582, SD = 1.018).

These findings lead to the rejection of the null hypothesis ($\mathbf{H^0}$) and the acceptance of the alternative hypothesis ($\mathbf{H^2}$) that there is a significant change to participants' entrepreneurial self-efficacy (ESE) due to reflective discourse following their attending the SHAPE training workshop. This means that the research question, "**To what extent does reflective discourse develop ESE?**" can be answered: to a great extent. This is in light of the significant changes reported by participants during the training programme. This is for all the aspects of ESE, namely opportunity identification, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

Previous research did not specifically explore the influence of reflective discourse on ESE. However, Mezirow (2003) states that reflective discourse is about weighing the evidence of your underlying assumptions through dialogue with other parties. People should be sufficiently emotionally intelligent to participate effectively in reflective discourse (Goleman, 1998). Reflective discourse is, however, not always necessary for transformative learning, as transformation can also be achieved through adaptive behaviour (Dix, 2016).

This study asked respondents if they "*had an in depth discussion with someone in which [they] questioned the way [they] think...*" The questionnaire did not use the term 'reflective discourse' in order to avoid confusing the participants. The questions with regard to reflective discourse were intended to explore if there were enough opportunities in the programme to ask and discuss important questions. The results are significant, as already discussed.

As in-depth discussion and reflective discourse are not exactly the same, future research could be used to evaluate the conditions that lead to effective reflective discourse. Future research can also evaluate the way in which to conduct a discourse that will make people disclose their underlying assumptions to other participants who they only know from participating in a training programme.

6.8 RESEARCH QUESTION 4: TO WHAT EXTENT DOES ACTION DEVELOP ENTREPRENEURIAL SELF-EFFICACY?

In order to answer the fourth research question; **to what extent does action develop ESE,** this research investigated the following goals:

A. To determine if action develops opportunity identification self-efficacy.

B. To determine if action develops relationship self-efficacy.

C. To determine if action develops managerial self-efficacy.

D. To determine if action develops tolerance self-efficacy.

The relevant hypothesis (H^4) dealing with **action** is:

H^4: There is a significant change to participants' entrepreneurial self-efficacy (ESE) due to action following his/ her attending the SHAPE training workshop.

Taking action to change reflects the pinnacle of transformative learning, which occurs after critical reflection and rational discourse (Kitchenham, 2008). In the questionnaire action was termed "I act in a way which can…"

This section presents the results from questions regarding **action**.

6.8.1 Action and Opportunity Identification

The first item regarding action was: **I act in a way which can help me identify opportunities to start a business.** This item focused directly on the research goal: **To determine if action develops opportunity identification self-efficacy.**

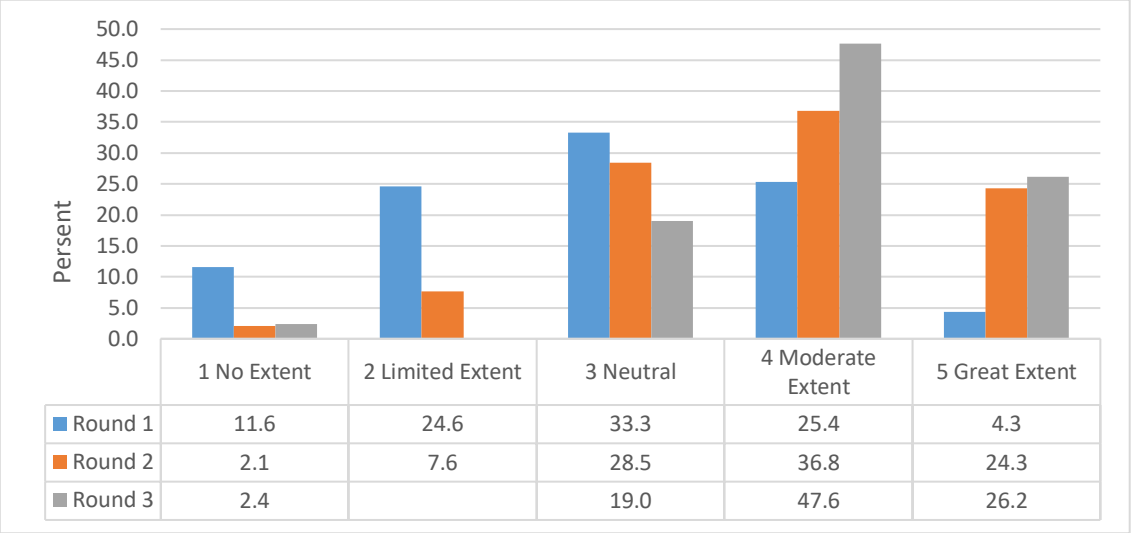
This item was an attempt to evaluate whether or not a person had considered taking action to exploit available business opportunities. The results are presented in Table 6.64 below, which includes the results from all the respondents in the study.

Table 6.64: Action and Opportunity Identification (Rounds 1 - 3)

A1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	16	11.6	11.7	11.7	3	2.1	2.1	2.1	3	2.4	2.5	2.5
2. Limited Extent	34	24.6	24.8	36.5	11	7.6	7.7	9.8				
3. Neutral	46	33.3	33.6	70.1	41	28.5	28.7	38.5	24	19.0	20.0	22.5
4. Moderate Extent	35	25.4	25.5	95.6	53	36.8	37.1	75.5	60	47.6	50.0	72.5
5. Great Extent	6	4.3	4.4	100.0	35	24.3	24.5	100.0	33	26.2	27.5	100.0
6. Missing Value	1	0.7			1	0.7			6	4.8		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.20 below, which allows for an easier visual presentation.

Figure 6.20: Action and Opportunity Identification (Rounds 1 - 3)



From Table 6.65 and Figure 6.20 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 29.7% in Round 1 to 65.3% in Round 2 and 73.8% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 36.5% in Round 1 to 9.8% in Round 2 and 2.5% in Round 3.

Table 6.65 below indicates the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.65: Action and Opportunity Identification (Rounds 1 - 3)

A1	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	6	10.0	10.2	10.2	2	3.3	3.3	3.3	2	3.3	3.4	3.4
2. Limited Extent	13	21.7	22.0	32.2	2	3.3	3.3	6.7				
3. Neutral	21	35.0	35.6	67.8	23	38.3	38.3	45.0	12	20.1	20.8	24.1
4. Moderate Extent	14	23.3	23.7	91.5	23	38.3	38.3	83.3	26	43.3	44.8	69.0
5. Great Extent	5	8.3	8.5	100.0	10	16.8	16.8	100.0	18	30.0	31.0	100.0
6. Missing Value	1	1.7							2	3.3		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.65 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 31.6% in Round 1 to 55.1% in Round 2 and up again to 73.3% in Round 3. The percentage of respondents selecting

"No Extent" and "Limited Extent" reduced from 32.2% in Round 1 to 6.7% in Round 2 and 3.4% in Round 3.

It can be seen that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in all rounds. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2. Some participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities to reflect on the action they can take when they initiate a business, which increased their opportunity identification self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 74.4% between Rounds 1 and 2 and by 33.03% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the increased confidence the participants felt after listening to the successful entrepreneurial experiences of the presenters. There was a significant increase in positive responses between Rounds 2 and 3, most likely because of participants completing the business canvass, which made their business ideas more tangible. As their business was very clear to them at that stage, they would have been more confident about their ability to identify opportunities.

6.8.2 Action and Marketing Self-Efficacy

The second item regarding action was; **I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice.** This item was focused directly on the research goal: **To determine if action develops relationship self-efficacy.**

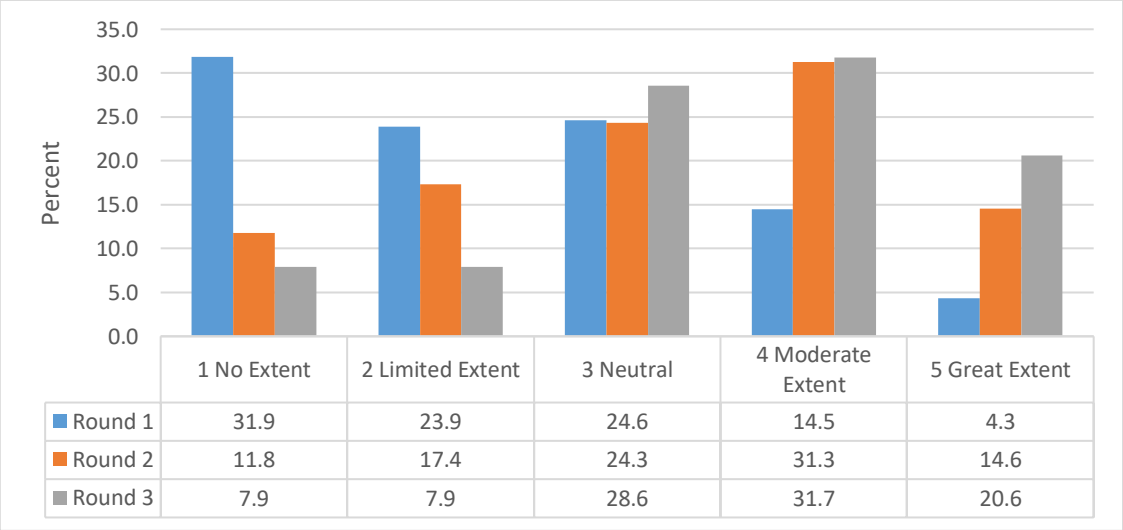
This item was an attempt to evaluate whether or not a person considered taking action in terms of marketing a service or product. The results are presented in Table 6.66 below, which presents the results from all the respondents in the study.

Table 6.66: Action and Marketing Self-Efficacy (Rounds 1 - 3)

A2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1 No Extent	44	31.9	32.1	32.1	17	11.8	11.9	11.9	10	7.9	8.2	8.2
2 Limited Extent	33	23.9	24.1	56.2	25	17.4	17.5	29.4	10	7.9	8.2	16.4
3 Neutral	34	24.6	24.8	81.0	35	24.3	24.5	53.8	36	28.6	29.5	45.9
4 Moderate Extent	20	14.5	14.6	95.6	45	31.3	31.5	85.3	40	31.7	32.8	78.7
5 Great Extent	6	4.3	4.4	100.0	21	14.6	14.7	100.0	26	20.6	21.3	100.0
6 Missing Value	1	0.7			1	0.7			4	3.2		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.21 below, which allows for an easier visual presentation.

Figure 6.21: Action and Marketing Self-Efficacy (Rounds 1 - 3)



From Table 6.66 and Figure 6.21 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 18.8% in Round 1 to 45.8% in Round 2 and 52.4% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 56.2% in Round 1 to 29.4% in Round 2 and 16.4% in Round 3.

Table 6.67 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.67: Action and Marketing Self-Efficacy (Rounds 1 - 3)

A2	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1 No Extent	9	15.0	15.3	15.3	3	5.0	5.0	5.0	1	1.7	1.7	1.7
2 Limited Extent	19	31.7	32.2	47.5	5	8.3	8.3	13.3	4	6.7	6.8	8.5
3 Neutral	21	35.0	35.6	83.1	21	35.0	35.0	48.3	18	30.0	30.5	39.0
4 Moderate Extent	8	13.3	13.6	96.6	21	35.0	35.0	83.3	23	38.2	39.0	78.0
5 Great Extent	2	3.3	3.3	100.0	10	16.7	16.7	100.0	13	21.7	22.0	100.0
6 Missing Value	1	1.7							1	1.7		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.67 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting “Moderate Extent” and “Great Extent” moved from 16.6% in Round 1 to 51.7% in Round 2 and up again to 59.9% in Round 3. The percentage of respondents selecting “No Extent” and “Limited Extent” reduced from 47.5% in Round 1 to 13.3% in Round 2 and 8.5% in Round 3.

It can be seen that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in all rounds. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2. A number of participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities to reflect on the action they can take when they initiate a business, which increased their marketing self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 211.4% between Rounds 1 and 2 and 15.9% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of increased confidence the participants felt after listening to the successful entrepreneurial experiences of the presenters. There was a significant increase in positive responses between Rounds 2 and 3, most likely because of participants completing the business canvass, which made their business ideas more tangible. As their business was clear to them at that stage, they would have been more confident about their ability to promote their business.

6.8.3 Action and Managerial Self-Efficacy

The third item regarding action was: **I act in a way which can help me manage my own business.** This item was focused directly on the research goal: **To determine if action develops managerial self-efficacy.**

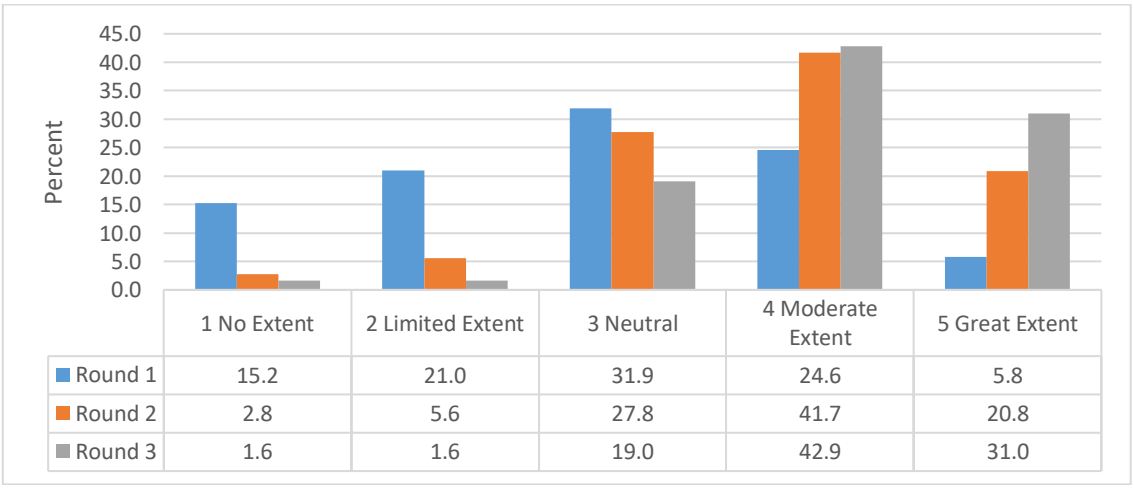
This item was an attempt to evaluate whether or not a person considered taking action to improve their ability to manage their own business. The results are presented in Table 6.68 below, which presents the results from all the respondents in the study.

Table 6.68: Action and Marketing Self-Efficacy (Rounds 1 - 3)

A3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	21	15.2	15.4	15.4	4	2.8	2.8	2.8	2	1.6	1.7	1.7
2. Limited Extent	29	21.0	21.3	36.8	8	5.6	5.6	8.5	2	1.6	1.7	3.3
3. Neutral	44	31.9	32.4	69.1	40	27.8	28.2	36.6	24	19.0	19.8	23.1
4. Moderate Extent	34	24.6	25.0	94.1	60	41.7	42.3	78.9	54	42.9	44.6	67.8
5. Great Extent	8	5.8	5.9	100.0	30	20.8	21.1	100.0	39	31.0	32.2	100.0
6. Missing Value	2	1.4			2	1.4			5	4.0		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.22 below, which allows for an easier visual presentation.

Figure 6.22: Action and Marketing Self-Efficacy (Rounds 1 - 3)



From Table 6.68 and Figure 6.22 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 30.4% in Round 1 to 62.5% in Round 2 and 73.8% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 36.8% in Round 1 to 8.5% in Round 2 and 3.3% in Round 3.

Table 6.69 below presents the responses from the 60 participants who participated in all 3 rounds of the study.

Table 6.69: Action and Marketing Self-Efficacy (Rounds 1 - 3)

A3	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	8	13.3	13.6	13.6	2	3.3	3.4	3.4	2	3.3	3.4	3.4
2. Limited Extent	11	18.3	18.6	32.2	3	5.0	5.1	8.5	2	3.3	3.4	6.8
3. Neutral	23	38.3	39.0	71.2	21	35.0	35.6	44.1	13	21.7	22.0	28.8
4. Moderate Extent	15	25.0	25.4	96.6	26	43.3	44.0	88.1	23	38.3	39.0	67.8
5. Great Extent	2	3.4	3.4	100.0	7	11.7	11.9	100.0	19	31.7	32.2	100.0
6. Missing Value	1	1.7			1	1.7			1	1.7		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.69 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 28.4% in Round 1 to 55.0% in Round 2 and up again to 70.0% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 32.2% in Round 1 to 8.5% in Round 2 and 6.8% in Round 3.

It can be seen that there was not a significant difference in the results between the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses in all rounds. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in the positive responses between Rounds 1 and 2. Some participants who had negative responses initially chose a neutral response instead of moving up to positive or remaining negative.

Considering the results above, it can be argued that the respondents had more opportunities to reflect on the action they can take when they initiate a business, which increased their marketing self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 93.66% between Rounds 1

and 2 and 27.3% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the increased confidence participants felt after listening to the successful entrepreneurial experiences of the presenters. There was a significant increase in positive responses between Rounds 2 and 3, most likely because of participants completing the business canvass, which made their business ideas more tangible. As their business was very clear to them at that stage, they would have been more confident about their ability to manage their business.

6.8.4 Action and Tolerance Self-Efficacy

The research question was: **I act in a way which can help me work under pressure, stress and constant change experienced if you own a business.** This item was focused directly on the research goal: **To determine if action develops tolerance self-efficacy.**

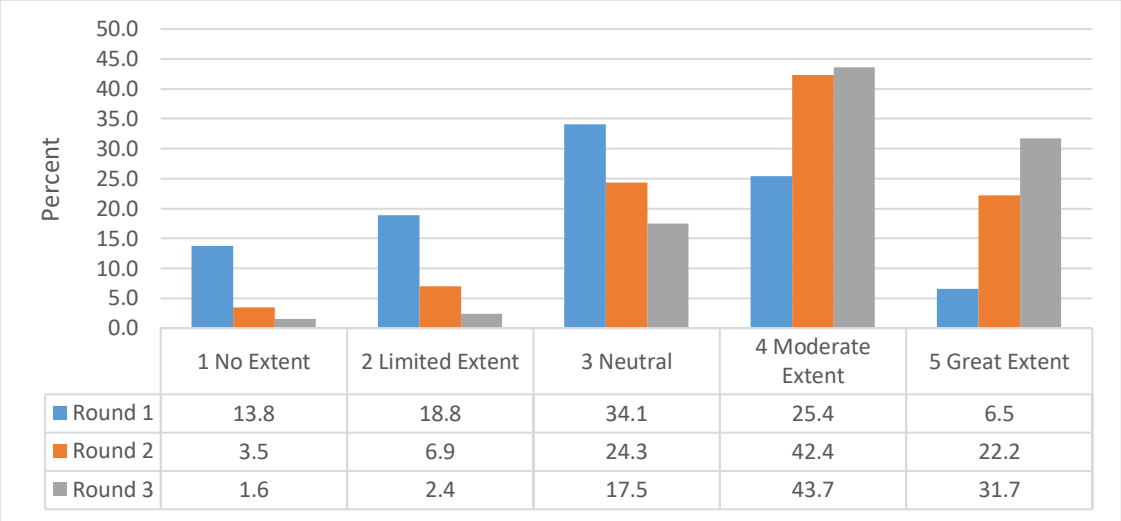
This item was an attempt to evaluate whether or not a person considered taking action to improve their ability to cope with the stress associated with owning a business. The results are presented in Table 6.70 below.

Table 6.70: Action and Tolerance Self-Efficacy (Rounds 1-3)

A4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1. No Extent	19	13.8	14.0	14.0	5	3.5	3.5	3.5	2	1.6	1.6	1.6
2. Limited Extent	26	18.8	19.1	33.1	10	6.9	7.0	10.5	3	2.4	2.5	4.1
3. Neutral	47	34.1	34.6	67.6	35	24.3	24.5	35.0	22	17.5	18.0	22.1
4. Moderate Extent	35	25.4	25.7	93.4	61	42.4	42.7	77.6	55	43.7	45.1	67.2
5. Great Extent	9	6.5	6.6	100.0	32	22.2	22.4	100.0	40	31.7	32.8	100.0
6. Missing Value	2	1.4			1	0.7			4	3.2		
Total	**138**	**100.0**	**100.0**		**144**	**100.0**	**100.0**		**126**	**100.0**	**100.0**	

The table above is summarised graphically in Figure 6.23 below, which allows for an easier visual presentation.

Figure 6.23: Action and Tolerance Self-Efficacy (Rounds 1-3)



From Table 6.70 and Figure 6.23 it can be seen that the trend grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 31.9% in Round 1 to 64.6% in Round 2 and 74.5% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 33.1% in Round 1 to 10.5% in Round 2 and 4.1% in Round 3.

The results are presented in Table 6.71 below, which includes the results from all the respondents who participated in in all rounds of the study.

Table 6.71: Action and Tolerance Self-Efficacy (Rounds 1-3)

A4	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1 No Extent	6	10.0	10.3	10.3	2	3.3	3.3	3.3	2	3.3	3.4	3.4
2 Limited Extent	9	15.0	15.5	25.9	4	6.7	6.7	10.0	2	3.3	3.4	6.8
3 Neutral	25	41.7	43.1	69.0	16	26.7	26.7	36.7	9	15.0	15.3	22.0
4 Moderate Extent	14	23.3	24.2	93.1	27	45.0	45.0	81.7	25	41.7	42.4	64.4
5 Great Extent	4	6.7	6.9	100.0	11	18.3	18.3	100.0	21	35.0	35.5	100.0
6 Missing Value	2	3.3							1	1.7		
Total	**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**		**60**	**100.0**	**100.0**	

Table 6.71 indicates a trend that grew more positive with increasing rounds. The percentage of respondents selecting "Moderate Extent" and "Great Extent" moved from 30.0% in Round 1 to 63.3% in Round 2 and up again to 76.7% in Round 3. The percentage of respondents selecting "No Extent" and "Limited Extent" reduced from 25.9% in Round 1 to 10.0% in Round 2 and 6.8% in Round 3. It can be seen that there was not a significant difference in the results between

the respondents who participated in all three rounds of the study and those who participated in only 1 or 2 rounds. Of concern was the substantial number of neutral responses, especially in Rounds 1 and 2. The substantial number of neutral scores for this question could be interpreted in the context of a fundamental increase in positive responses between Rounds 1 and 2.

Considering the results above, it can be argued that the respondents had more opportunities to reflect on the action they can take when they initiate a business, which increased their marketing self-efficacy. This improvement was especially pronounced between Rounds 1 and 2 (for participants in all rounds), where the positive responses increased by 111.0% between Rounds 1 and 2 and 21.2% between Rounds 2 and 3. This significantly higher improvement between Rounds 1 and 2 could be as a result of the increased confidence the participants felt after listening to the successful entrepreneurial experiences relayed by the presenters. There was a significant increase in positive responses between Rounds 2 and 3, most likely because of participants completing the business canvass, which made their business ideas more tangible. As their business was very clear to them at that stage, they would have been more confident about their ability to deal with the stresses associated with managing a business.

6.8.5 Action - Overall Descriptive Statistics

To gain a summarised understanding of action, the aggregate scores were calculated. The aggregate scores are presented in Table 6.72 below.

Table 6.72: Action - Descriptive statistics

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Action (All Respondents)	135	2.787	0.924	142	3.701	0.831	119	3.996	0.754
Action (All Rounds Respondents)	60	2.855	0.858	60	3.588	0.797	60	3.920	0.867

From the table above it is clear that there was a general increase in means from Round 1 to Round 3 for action, based on the aggregate scores. To evaluate the level of change, percentage increases were calculated and the results are presented in Table 6.73 below.

Table 6.73: Percentage Increases in Action Means (Rounds 1-3)

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Action (All Respondents)	32.8%	43.4%	8.0%
Action (All Rounds Respondents)	25.7%	37.3%	9.3%

From the table above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was higher than the increase from Rounds 2 to 3.

To gain a better understanding of the descriptive scores, further analysis was performed on the respondents to all rounds by gender. The results are presented in Tables 6.74 and 6.75 and Figure 6.24 below.

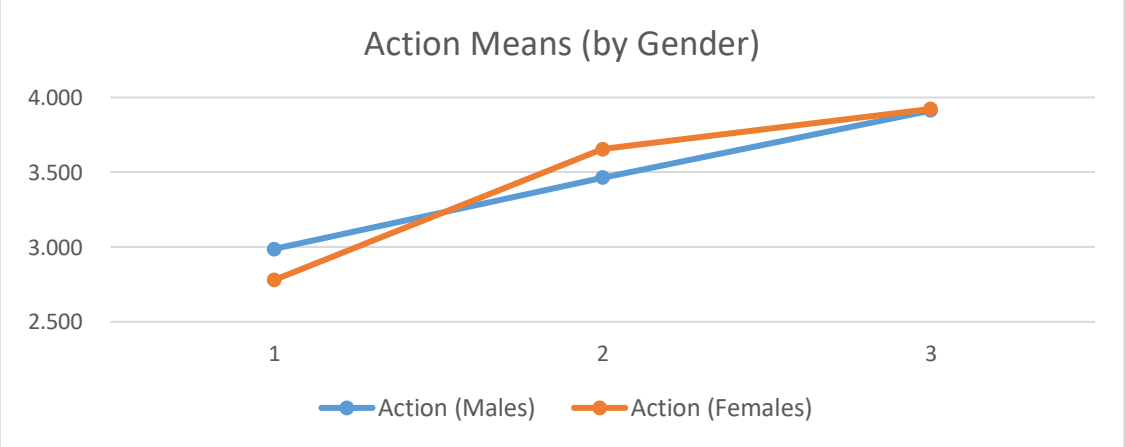
Table 6.74: Action - Descriptive Statistics by Gender

Descriptives	Round 1			Round 2			Round 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Action (Males)	21	2.988	0.718	21	3.464	0.811	21	3.913	0.957
Action (Females)	39	2.781	0.927	39	3.654	0.792	39	3.923	0.829
Action (Overall)	60	2.855	0.858	60	3.588	0.797	60	3.920	0.867

Table 6.75: Percentage Increases In Action Means By Gender

Descriptives	% Changes		
	R1- R2	R1- R3	R2- R3
Action (Males)	15.9%	30.9%	12.9%
Action (Females)	31.4%	41.1%	7.4%
Action (Overall)	25.7%	37.3%	9.3%

Figure 6.24: Changes In Action By Gender



From the tables and figure above it can be seen that although there were significant increases in means from Round 1 to Round 3, the change from Round 1 to Round 2 was four times higher than the increase from Rounds 2 to 3 for females. On the other hand, the increase in scores between the rounds remained more or less the same for males. It should however be highlighted

that the sample of males was too small at 21 participants in all rounds of the study to draw any meaningful conclusions.

For further analysis, the action hypothesis was tested. The process followed in hypothesis testing was described in section 6.3.6 above. The results of the ESE and action hypothesis are presented below.

6.8.6 ESE and Action (H^4)

The hypothesis being tested in this section was:

H^4: There is a significant change to participants' **entrepreneurial self -efficacy** (ESE) due to **action** following participants attending the SHAPE training workshop.

After running multivariate tests to evaluate the significance of the change, the results are as presented in Table 6.76.

Table 6.76: Multivariate Tests - Action (Rounds 1 - 3)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Action	Pillai's Trace	0.543	30.881	2.000	52.000	0.000	0.543	61.763	1.000
	Wilks' Lambda	0.457	30.881	2.000	52.000	0.000	0.543	61.763	1.000
	Hotelling's Trace	1.188	30.881	2.000	52.000	0.000	0.543	61.763	1.000
	Roy's Largest Root	1.188	30.881	2.000	52.000	0.000	0.543	61.763	1.000

There was a statistically significant increase in ESE due to action after the SHAPE training program, Wilk's $\mathbf{\Lambda} = 0.457$, $F(2, 55.0) = 30.881$, $p < 0.05$, partial $\boldsymbol{\eta}^2 = 0.543$.

As the Wilk's Lambda and other multivariate tests were significant, Mauchly's test of sphericity was run to evaluate whether or not the variances of differences of all pairs of groups were equal (Grande, 2016). The results are presented in Table 6.77 below.

Table 6.77: Mauchly's Test of Sphericity – Action (Rounds 1 - 3)

Within subjects Effect	Mauchly's W	Approx Chi-Square	df	Sig	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Action	0.913	4.756	2	0.093	0.920	0.951	0.500

From the table above, Mauchly's test of sphericity indicated that the assumption of sphericity had have not been violated ($\chi^2(2) = 0.913$, $p = 0.093$), therefore the tests of within subjects effects were performed and the results are presented in Table 6.44 below.

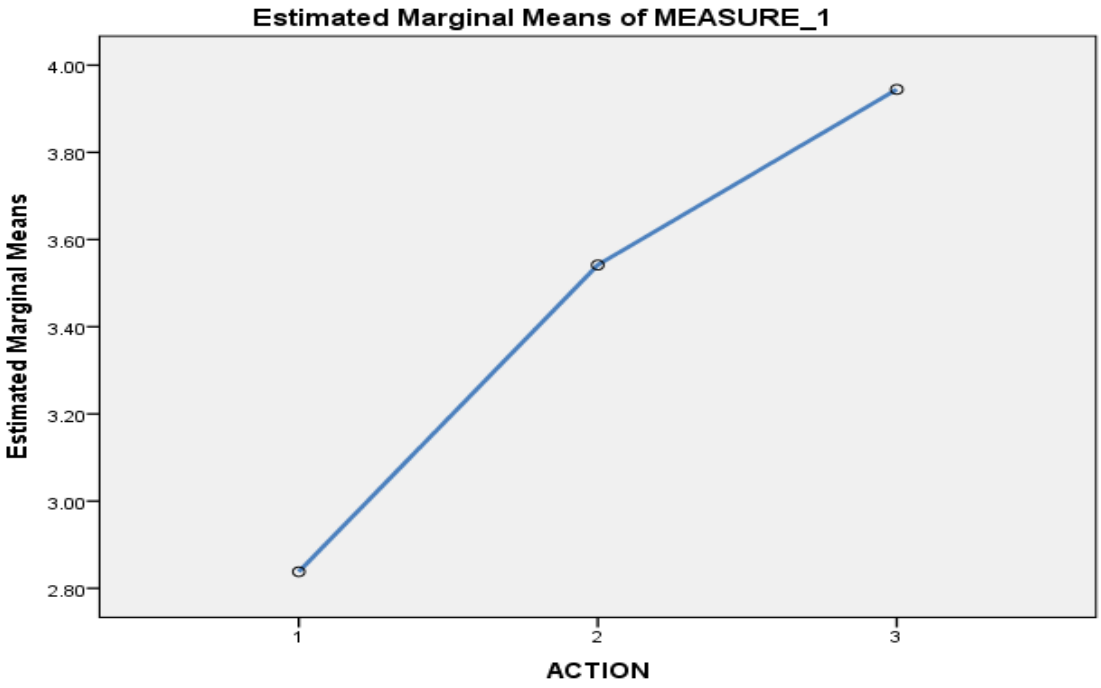
Table 6.78: Tests of Within Subjects Effects – Action (Rounds 1 - 3)

Source	Sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	1918.557	1.000	1918.557	1639.363	0.000	0.969	1639.363	1.000
Error	62.026	53.000	1.170					

a. Computed using alpha = .05

There were significant within subjects effects of action on ESE scores overall, ($F(1, 53) = 1639.363$, $p < 0.05$, $\eta_p^2 = 0.969$). This was explained further by the profile plots in Figure 6.25 below.

Figure 6.25: Profile Plots- Action (Rounds 1 - 3)



The profile plots in the graph above indicate that the mean for ESE increased steeply due to Action from Round 1 to Round 2 and not as steeply between Rounds 2 and 3.

To evaluate the significance of the changes, we examine the results of the Bonferroni post hoc test. These are presented in the pairwise comparison in Table 6.79 below.

Table 6.79: Pairwise Comparisons: Action (Rounds 1 - 3)

Reflective Discourse		Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.721*	0.109	0.000	-0.989	-0.453
1	3	-1.083*	0.135	0.000	-1.416	-0.751
2	3	-.362*	0.114	0.007	-0.642	-0.082

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Post hoc comparisons using the Bonferroni correction indicated that the mean score from Round 1 (M = 2.787, SD = 0.924) was significantly different from Round 2 (M = 3.7001, SD = 0.831) and Round 3 (M = 3.996, SD = 0.754). The mean for Round 2 (M = 3.7001, SD = 0.831) was also significantly different from that of Round 3 (M = 3.996, SD = 0.754).

These findings lead to the rejection of the null hypothesis (**H^0**) and acceptance of the alternative hypothesis (**H^4**) that there was a significant change to participants' entrepreneurial self-efficacy (ESE) due to action following their attending the SHAPE training workshop. This means that, based on the research results, the research question, "**To what extent does action develop ESE?**" the answer is: to a great extent. This is in light of the significant changes reported by participants during the training programme. This is for all aspects of ESE, namely opportunity identification, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

Previous research did not specifically explore the influence of action on ESE. However, action is the highest form of transformative learning characterised by a person who critically evaluates current information and conditions and takes action (Kitchenham, 2008).

This study asked respondents if they "*act in a way which can help [them] identify opportunities...*" This question was meant to evaluate the behaviour of respondents over time, in light of the various dimensions of ESE. The results were significant, as already discussed. In theory, respondents were more engaged with the various aspects of ESE after the training programme.

As this study did not establish the specific ESE dimension upon which the respondents were acting, future research could flesh out the activities in which respondents take part to enhance

their ESE. This would help guide the activities that could be undertaken to enhance ESE from training.

6.9 PERSONAL FACTORS

Various factors influence ESE. This research considered a respondent's attitude with regard to experts in the country, government policies, their culture, religion, media, family, age, life experience, existing entrepreneurs and beliefs about what it takes to be successful. The results are presented in Table 6.80 below. Subsequently, this section will briefly discuss these results per question.

Table 6.80: Personal Factors That Influence ESE (Rounds 1 - 3)

Questions PF 1 to PF 11	Round 1					Round 2					Round 3				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
PF1. I think experts in the country are supportive of starting new businesses	20	40.0	44.0	27.0	6.0	12	33.0	49.0	38.0	11.0	9	18.0	41.0	36.0	20.0
	14.6%	29.2%	32.1%	19.7%	4.4%	8.4%	23.1%	34.3%	26.6%	7.7%	7.3%	14.5%	33.1%	29.0%	16.1%
PF2. I think government policies are supportive of starting your own business	21	32	50	27	7	7	38	58	24	15	6	23.0	40.0	37.0	18.0
	15.3%	23.4%	36.5%	19.7%	5.1%	4.9%	26.8%	40.8%	16.9%	10.6%	4.8%	18.5%	32.3%	29.8%	14.5%
PF3. My culture and community are supportive of starting your own business	21	34.0	31.0	38.0	13.0	19	29.0	38.0	34.0	23.0	6	19.0	36.0	35.0	26.0
	15.3%	24.8%	22.6%	27.7%	9.5%	13.3%	20.3%	26.6%	23.8%	16.1%	4.9%	15.6%	29.5%	28.7%	21.3%
PF4. My religion is supportive of starting your own business	6	16.0	39.0	40.0	35.0	6	10.0	29.0	46.0	49.0	5	14.0	19.0	39.0	43.0
	4.4%	11.8%	28.7%	29.4%	25.7%	4.3%	7.1%	20.7%	32.9%	35.0%	4.2%	11.7%	15.8%	32.5%	35.8%
PF5. The TV, internet and media are supportive of people in business and those who start own businesses	2	15.0	39.0	50.0	31.0	3	13.0	26.0	56.0	45.0	4	6.0	19.0	43.0	51.0
	1.5%	10.9%	28.5%	36.5%	22.6%	2.1%	9.1%	18.2%	39.2%	31.5%	3.3%	4.9%	15.4%	35.0%	41.5%
PF6. My family will support me if I start my own business	2	10.0	19.0	36.0	70.0	4	8.0	28.0	30.0	73.0	2	5.0	19.0	35.0	63.0
	1.5%	7.3%	13.9%	26.3%	51.1%	2.8%	5.6%	19.6%	21.0%	51.0%	1.6%	4.0%	15.3%	28.2%	50.8%
PF7. I'm the right age to be in business or start my own business	1	5.0	16.0	42.0	71.0		6.0	5.0	30.0	102.0		2.0	7.0	28.0	87.0
	0.7%	3.7%	11.9%	31.1%	52.6%	0.0%	4.2%	3.5%	21.0%	71.3%	0.0%	1.6%	5.6%	22.6%	70.2%
PF8. I have the right life experiences to start my own business	6	29.0	48.0	28.0	24.0	3	14.0	37.0	35.0	53.0		4.0	32.0	38.0	50.0
	4.4%	21.5%	35.6%	20.7%	17.8%	2.1%	9.9%	26.1%	24.6%	37.3%	0.0%	3.2%	25.8%	30.6%	40.3%
PF9. I admire people who start or own their own business	1	2.0	5.0	20.0	105.0		2.0	9.0	13.0	118.0			9.0	23.0	90.0
	0.8%	1.5%	3.8%	15.0%	78.9%	0.0%	1.4%	6.3%	9.2%	83.1%	0.0%	0.0%	7.4%	18.9%	73.8%
PF10. I believe entrepreneurs are born with the relevant traits to start or own a business	23	22.0	42.0	29.0	21.0	19	15.0	37.0	32.0	40.0	13	7.0	33.0	33.0	37.0
	16.8%	16.1%	30.7%	21.2%	15.3%	13.3%	10.5%	25.9%	22.4%	28.0%	10.6%	5.7%	26.8%	26.8%	30.1%
PF11. I believe anybody can become a successful entrepreneur	6	8.0	27.0	34.0	62.0	9	9.0	21.0	24.0	80.0	3	4.0	17.0	29.0	70.0
	4.4%	5.8%	19.7%	24.8%	45.3%	6.3%	6.3%	14.7%	16.8%	55.9%	2.4%	3.3%	13.8%	23.6%	56.9%

In general, people's attitude towards these factors changeover time. In most cases people become more confident that these factors are supportive of entrepreneurship. Below is an item by item discussion of these personal factors.

6.9.1 Attitude towards entrepreneurship experts in the country

Item PF 1 was: **I think experts in the country are supportive of starting new businesses.** In Round 1 43.8% gave a negative response i.e. "No extent" or "Limited extent", 32.1% were "Neutral" and 24.1% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 31.5% negative, 34.3% neutral and 34.3% positive in Round 2. There were further changes in Round 3 to 21.8% negative, 33.1% neutral and 45.2% positive.

These changes represent a 28.1% reduction in negative responses from Round 1 to Round 2, a 50.3% reduction between Rounds 1 and 3 and a 30.8% reduction between Rounds 2 and 3. The positive responses increased by 42.3% between Rounds 1 and 2, by 87.5% between Rounds 1 and 3 and by 31.8% between Rounds 2 and 3.

It is possible that the respondents became more aware of the activities of experts in the field of entrepreneurship from attending the SHAPE program. This then led to their improved perception, as reflected in the results.

6.9.2 Attitude towards government policies on entrepreneurship

Item PF 2 was: **I think government policies are supportive of starting your own business.** In Round 1 38.7% gave a negative response i.e. "No extent" or "Limited extent", 36.5% were "Neutral" and 24.8% were positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 31.7% negative, 40.8% neutral and 27.5% positive in Round 2. There were further changes in Round 3 to 23.4% negative, 32.3% neutral and 44.4% positive.

These changes represent an 18.1% reduction in negative responses from Rounds 1 to 2, a 39.5% reduction between Rounds 1 and 3 and a 26.2% reduction between Rounds 2 and 3. The positive responses increased by 10.7% between Rounds 1 and 2, by 78.7% between Rounds 1 and 3 and by 61.5% between Rounds 2 and 3.

It is possible that from attending the SHAPE program respondents became increasingly aware of government policies that support entrepreneurship. For instance, in week 4, a Head of Department from Durban Investment Promotion, eThekwini Municipality gave a presentation of what the municipality is doing to promote investments in the region. This and other experiences might

have led to their improved perception of government's activities towards promoting entrepreneurship.

6.9.3 Attitude towards culture and community in supporting entrepreneurship

Item PF 3 was: **My culture and community are supportive of me starting my own business.** In Round 1 40.1% gave a negative response i.e. "No extent" or "Limited extent", 22.6% were "Neutral" and 37.2% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 33.6% negative, 26.6% neutral and 39.9% positive in Round 2. There were further changes in Round 3 to 20.5% negative, 29.5% neutral and 50.0% positive.

These changes represent a 16.4% reduction in negative responses from Round 1 to 2, a 49.0% reduction between Rounds 1 and 3 and a 39.0% reduction between Rounds 2 and 3. The positive responses increased by 7.1% between Rounds 1 and 2, by 34.3% between Rounds 1 and 3 and by 25.4% between Rounds 2 and 3. It is possible that from attending the SHAPE program respondents became increasingly aware of the way in which they can effectively deal with what they thought were negative factors in their culture. This led to their improved perception, as reflected in the results.

6.9.4 Attitude towards own religion in supporting entrepreneurship

Item PF 4 was: **My religion is supportive of me starting my own business.** In Round 1 16.2% gave a negative response i.e. "No extent" or "Limited extent", 28.7% were "Neutral" and 55.1% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 11.4% negative, 20.7% neutral and 67.9% positive in Round 2. There were further changes in Round 3 to 15.8% negative, 15.8% neutral and 68.3% positive.

These changes represent a 29.4% reduction in negative responses from Rounds 1 to 2, a 2.1% reduction between Rounds 1 and 3 and a 38.5% increase between Rounds 2 and 3. The positive responses increased by 23.0% between Rounds 1 and 2, by 23.9% between Rounds 1 and 3 and by 0.7% between Rounds 2 and 3. It is possible that from attending the SHAPE program, respondents became increasingly aware of the way in which they can effectively deal with what they thought were negative factors in their religion. This led to their improved perception, as reflected in the results.

6.9.5 Attitude towards media's role in supporting entrepreneurship

Item PF 5 is: **The TV, internet and media are supportive of people in business and those who start their own businesses.** In Round 1 12.4% gave a negative response i.e. "No extent" or "Limited extent", 28.5% were "Neutral" and 59.1% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 11.2% negative, 18.2% neutral and 70.6% positive in Round 2. There were further changes in Round 3 to 8.1% negative, 15.4% neutral and 76.4% positive.

These changes represent a 9.8% reduction in negative responses from Rounds 1 to 2, a 34.5% reduction between Rounds 1 and 3 and a 27.3% reduction between Rounds 2 and 3. The positive responses increased by 19.5% between Rounds 1 and 2, by 29.3% between Rounds 1 and 3 and by 8.2% between Rounds 2 and 3.

It is possible that from attending the SHAPE program, respondents became more cognisant of the entrepreneur-supportive messages being portrayed in the media. This led to their improved perception, as reflected in the results.

6.9.6 Opinion on support of one's own family to one's own entrepreneurial venture

Item PF 6 is: **My family will support me if I start my own business.** In Round 1 8.8% gave a negative response i.e. "No extent" or "Limited extent", 13.9% were "Neutral" and 77.4% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 8.4% negative, 19.6% neutral and 72.0% positive in Round 2. There were further changes in Round 3 to 5.6% negative, 15.3% neutral and 79.0% positive.

These changes represent a 4.2% reduction in negative responses from Rounds 1 to 2, a 35.6% reduction between Rounds 1 and 3 and a 32.7% reduction between Rounds 2 and 3. The positive responses decreased by 6.9% between Rounds 1 and 2, by 2.1% between Rounds 1 and 3 and by 9.7% between Rounds 2 and 3.

There were no fundamental changes in the respondents' opinion of their family towards their being in business. Their opinion was mostly positive in Round 1 at 77% and the small changes in score could be based purely on chance and slightly differing samples between the rounds.

6.9.7 Attitude towards own age to starting a business

Item PF 7 is: **I am the right age to be in business or start my own business.** In Round 1 4.4% gave a negative response i.e. "No extent" or "Limited extent", 11.9% were "Neutral" and 83.7% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 4.2% negative, 3.5%

neutral and 92.3% positive in Round 2. There were further changes in Round 3 to 1.6% negative, 5.6% neutral and 92.7% positive.

These changes represent a 5.6% reduction in negative responses from Rounds 1 to 2, a 63.7% reduction between Rounds 1 and 3 and a 61.6% reduction between Rounds 2 and 3. The positive responses increased by 10.3% between Rounds 1 and 2, by 10.8% between Rounds 1 and 3 and by 0.5% between Rounds 2 and 3. It is possible that from attending the SHAPE program, the respondents became increasingly aware that age was not a significant barrier to initiating their own business. This led to their improved perceptions, as reflected in the results.

6.9.8 Attitude towards one's own experience to start a business

Item PF 8 is: **I have the right life experiences to start my own business.** In Round 1 25.9% gave a negative response i.e. "No extent" or "Limited extent", 35.6% were "Neutral" and 38.5% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 12.0% negative, 26.1% neutral and 62.0% positive in Round 2. There were further changes in Round 3 to 3.2% negative, 25.8% neutral and 71.0% positive.

These changes represent a 53.8% reduction in negative responses from Rounds 1 to 2, an 87.6% reduction between Rounds 1 and 3 and a 73.1% reduction between Rounds 2 and 3. The positive responses increased by 60.9% between Rounds 1 and 2, by 84.2% between Rounds 1 and 3 and by 14.5% between Rounds 2 and 3.

It is possible that from attending the SHAPE program, respondents began to value their life experiences as a basis for starting their own business. This led to their improved perceptions, as reflected in the results.

6.9.9 Attitude towards other entrepreneurs

Item PF 9 is: **I admire people who start or own their own business.** In Round 1 2.3% gave a negative response i.e. "No extent" or "Limited extent", 3.8% were "Neutral" and 94.0% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 1.4% negative, 6.3% neutral and 92.3% positive in Round 2. There were further changes in Round 3 to 0.0% negative, 7.4% neutral and 92.6% positive.

These changes represent a 37.6% reduction in negative responses from Rounds 1 to 2, a 100% reduction between Rounds 1 and 3 and a 100% reduction between Rounds 2 and 3. The positive responses reduced by 1.8% between Rounds 1 and 2, by 1.4% between Rounds 1 and 3 and by 0.4% between Rounds 2 and 3. The largely positive perception of other people in business did not

change much over time. It is expected that people who wish to pursue entrepreneurship will have a positive attitude towards other people in business.

6.9.10 Belief in whether or not entrepreneurs are born with the relevant traits

Item PF 10 is: **I believe entrepreneurs are born with the relevant traits to start or own a business.** In Round 1 32.8% gave a negative response i.e. "No extent" or "Limited extent", 30.7% were "Neutral" and 36.5% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 23.8% negative, 25.9% neutral and 50.3% positive in Round 2. There were further changes in Round 3 to 16.3% negative, 26.8% neutral and 56.9% positive.

These changes represent a 27.6% reduction in negative responses from Rounds 1 to 2, a 50.5% reduction between Rounds 1 and 3 and a 31.6% reduction between Rounds 2 and 3. The positive responses increased by 38% between Rounds 1 and 2, by 55.9% between Rounds 1 and 3 and by 13.0% between Rounds 2 and 3.

The results from this question are slightly confusing, especially when read with the next item. In a sense, if a person believes people are born with the traits that are relevant to be a successful entrepreneur, it should be expected that he/ she should not believe that anyone can be an entrepreneur, as in the next item. This contradiction could have arisen because the respondents did not see the apparent contradiction.

6.9.11 Belief in whether anybody can become an entrepreneur

Item PF 11 is: **I believe anybody can become a successful entrepreneur.** In Round 1 10.2% gave a negative response i.e. "No extent" or "Limited extent", 19.7% were "Neutral" and 70.1% positive i.e. "Moderate Extent" or "Great Extent". These figures changed to 12.6% negative, 14.7% neutral and 72.7% positive in Round 2. There were further changes in Round 3 to 5.7% negative, 26.8% neutral and 80.5% positive.

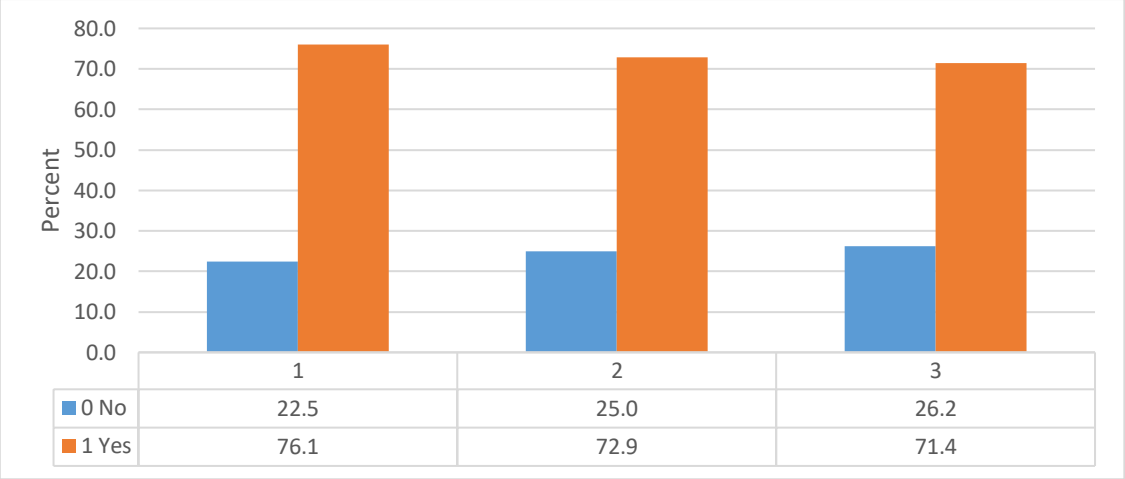
These changes represent a 23.2% increase in negative responses from Rounds 1 to 2, a 44.3% reduction between Rounds 1 and 3 and a 54.8% reduction between Rounds 2 and 3. The positive responses increased by 3.8% between Rounds 1 and 2, by 14.9% between Rounds 1 and 3 and by 10.7% between Rounds 2 and 3.

It is possible that from attending the SHAPE program, respondents became increasingly aware that to be a successful entrepreneur there are certain skills a person needs to acquire and that are not necessarily natural traits. This means that anyone who acquires those skills improves the odds of being successful as an entrepreneur.

6.9.12 Someone in my family owns a business

There is significant literature on the impact of an entrepreneurial family. Numerous scholars agree that growing up in an entrepreneurial family increases the potential of an individual to become an entrepreneur (Davoudi, 2017; Hout and Rosen, 1999; Mathews and Moser, 1995). Item PF 12 set out to elicit that information and read: **There is someone in my family that owns their own business.** The results are presented in Figure 6.26.

Figure 6.26: Someone in the family owns a business (Rounds 1-3)



From Figure 6.26 it can be seen that the vast majority of the respondents come from entrepreneurial families. In all the rounds more than 70% of the respondents were from entrepreneurial families.

The results depicted above of someone in the family owning a business is a surprise. The established business ownership rate for South Africa was 2.5% (Global Entrepreneurship Monitor, 2017), which is far lower than people in this study who reported that they have a relation who owns a business. The substantial percentage difference brings into question whether or not the respondents really understood the question or rather whether the question was measuring the "Established Business Ownership Rate". It is possible that respondents were answering a question "I know someone who owns a business".

6.9.13 How successful is the family/ relative's business?

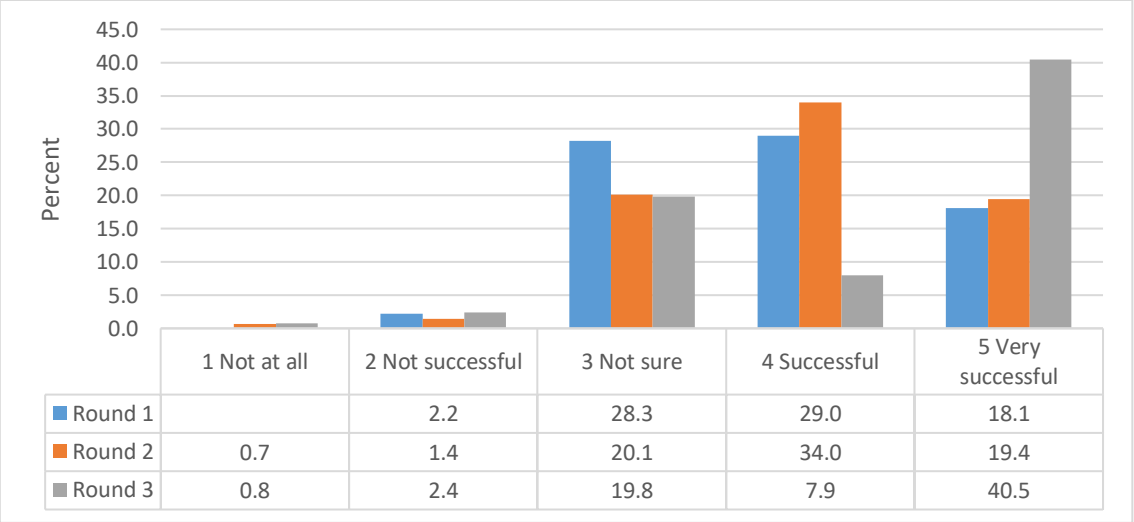
The item was: **In your opinion, how successful are they in their own business?** The results are shown in Table 6.81 below.

Table 6.81: How successful is the family business (Rounds 1 - 3)

PF13	Round 1				Round 2				Round 3			
	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %	FQ	%	Valid %	Cum %
1 Not at all					1	0.7	0.9	0.9	1	0.8	1.1	1.1
2 Not successful	3	2.2	2.8	2.8	2	1.4	1.8	2.8	3	2.4	3.3	4.4
3 Not sure	39	28.3	36.4	39.3	29	20.1	26.6	29.4	25	19.8	27.8	32.2
4 Successful	40	29.0	37.4	76.6	49	34.0	45.0	74.3	10	7.9	11.1	43.3
5 Very successful	25	18.1	23.4	100.0	28	19.4	25.7	100.0	51	40.5	56.7	100.0
6 Missing Value	31	1.4			35	1.4			36	4.0		
Total	**138**	**78.9**	**100.0**		**144**	**77.1**	**100.0**		**126**	**75.4**	**100.0**	

The table above is summarised graphically in Figure 6.27 below, which allows for an easier visual presentation.

Figure 6.27: How successful is the family business (Rounds 1 - 3)



From Table 6.22 and Figure 6.27 it can be seen that the majority opinion is that their family or relative's business is either successful or very successful. The percentage of respondents selecting "Successful" and "Very successful" was 47.1% in Round 1, 53.5% in Round 2 and 48.4% in Round 3. The percentage of respondents selecting "Not at all" and "Not successful" was small; 2.8% in Round 1, 2.8% in Round 2 and 4.4% in Round 3.

The success rate reported here is a surprise given the pervasive bleak business failure statistics in South Africa. For example, in 2013 the Minister of Trade placed the failure rate of entrepreneurial businesses at 71% during the first year (Burger, 2016). Other scholars report that 70% to 80% of SMMEs fail in the first 5 years in South Africa (Fatoki and Garwe, 2010; Friedrich, 2016). It is possible that the reports of success provided were based on the way in which the entrepreneurs

they know carry themselves, not on real business metrics. So, if the entrepreneurs are outgoing and speak positively about their businesses, the respondents judged that as success.

6.10 COMPARING GENDER SCORES USING MANN WHITNEY U TEST

This section compares the differences, if any, in the scores between genders for all participants. As the data in this study was not normally distributed, as was shown in section 6.3, this means the Mann Whitney U Test was used to make the comparison, instead of the ANOVA. The Mann Whitney U Test does not make an assumption of normality (Grande, 2017b). The Mann Whitney U Test was conducted for the three rounds to find the areas of differences. The independent variable was gender. The assumptions for running the Mann Whitney U Test would be that there was no statistically significant difference within the group based on gender. The results are summarised in Table 6.82 and also detailed in Annexure 10.

Table 6.82: Gender differences - Mann Whitney U test (Rounds 1 - 3)

	Round 1		Round 2		Round 3	
Transformative Learning Stage	**Mann-Whitney**	**Asymp. Sig (2 tailed**	**Mann-Whitney**	**Asymp. Sig (2 tailed**	**Mann-Whitney**	**Asymp. Sig (2 tailed**
Disorienting Dilemma	1596.500	0.004	415.000	0.742	1366.000	0.073
Critical Reflection	1547.000	0.003	391.000	0.898	1517.500	0.307
Reflective Discourse	1952.000	0.196	354.000	0.324	1650.000	0.973
Action	1687.500	0.014	350.000	0.248	1363.000	0.217
Personal Factors	1829.000	0.368	342.500	0.455	1247.500	0.346

From Table 6.82 above, the Mann Whitney U test indicates that there was a statistically significant difference in Round 1 for disorienting dilemma, $\chi^2(2) = 1596.500$, $p < 0.05$ and critical reflection, $\chi^2(2) = 1547.000$, $p < 0.05$, Action, $\chi^2(2) = 1687.500$, $p < 0.05$. However, the same test shows that there was no statistically significant difference in Round 1 for reflective discourse and personal factors. It also reflected no statistically significant differences in all transformative learning stages for Round 2 and Round 3. This means the differences between males and females had disappeared by the time the instrument was administered the second time.

6.11 FACTOR ANALYSIS

Factor analysis is meant to provide a model that explains the covariance or variance between observed variables using fewer unobserved factors and weightings (Lambert, 2014). In other words, it attempts to bind variables into one variable driving their values (Waller, 2013). Factor analysis is also used for testing theory and dimension reduction (Lambert, 2014).

Confirmatory factor analysis (CFA) was conducted for the three (3) rounds of the study. In CFA a researcher uses this approach to test proposed theory (Williams et al., 2010) and assess each scale item's contribution as well as how it measures the concept (Hair et al, 2014). The results are discussed below.

6.11.1 KMO and Bartlett's Test (Rounds 1 – 3)

The Kaiser-Meyer-Olkin Measure is used to compare the magnitudes of observed correlation coefficients versus the magnitude of partial correlation coefficients (Grande, 2016a). The Bartlett's Test of Sphericity is used to test the hypothesis that the correlation matrix is an identity matrix (Grande, 2016a). In general, a KMO of greater than 0.050 is considered acceptable (Grande, 2016a). The KMO and Bartlett's test for all the rounds in this study is presented in Table 6.83.

Table 6.83: KMO and Bartlett's Test (Rounds 1-3)

KMO and Bartlett's Test		Round 1	Round 2	Round 3
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.771	0.764	0.699
Bartlett's Test of Sphericity	Approx. Chi-Square	1409.533	1327.553	1316.695
	df	406	406	406
	Sig.	0.000	0.000	0.000

From table 6.83 above, the KMO of Sampling adequacy of Round 1, KMO = 0.771, Round 2, KMO = 0.764 and Round 3, KMO = 0.699, were all deemed adequate, as they were greater than the recommended KMO > 0.05. The Bartlett's Test of sphericity was significant for all rounds; (χ^2 (406) = 1409.533, $p < 0.05$ Round 1, χ^2 (406) = 1327.553, $p < 0.05$ Round 2, χ^2 (406) = 1327.553, $p < 0.05$ Round 3. This meant that communalities could be explored.

6.11.2 Communalities (Rounds 1 – 3)

Next the extraction values for Rounds 1 – 3 of the study is explored, which are in the communalities table in Annexure 7. The extraction values explain the proportion of variance that is accounted for by each factor (Educresem, 2014). If the extracted value is too low, it means that

it is unrelated to the other items in the set due to poor design of the question or the question was not fully understood by the respondents or there was a bias in the responses (Educresem, 2014).

It can be observed from Annexure 7 that the extraction values were relatively high, all of them greater than 0.5. In fact, most of the items have a variance above 0.7 for all rounds. Next the total variance explained was explored.

6.11.3 Total variance explained (Rounds 1 – 3)

As the primary purpose of factor analysis is to explain as much of the variance as possible with as few factors as possible, the total variance table attempts to explain how much the variability in the data has been modelled by extracted factors (Grande, 2016a; Educresem, 2014). The decision was to only retain components with an Eigen value greater than 1. The total variance explained table for this study is in Annexure 8.

Annexure 8 indicates that in Round 1, initial Eigenvalues indicated that the first 10 factors explained 75.402% of the variance. In Round 2, initial Eigenvalues indicated that the first 8 factors explained 67.360% of the variance. In Round 3, initial Eigenvalues indicated that the first 9 factors explained 74.927% of the variance. In light of the above, 10 factors were chosen for further analysis for Round 1, 9 for Round 2 and 9 for Round 3.

6.11.4 Component matrices (Rounds 1 – 3)

The component matrix table shows the relationship between the items and the components with Eigen values greater than 1, as in section 6.11.3 above. The higher the absolute value the more it contributes to the component (Chetty and Datt, 2015).

Annexure 9 contains the unrotated factor loadings, which are the correlations between the variable and the factor. The researcher did not choose the option to suppress very low correlation in order to reflect all values. These factors are then rotated in section 6.11.5 below.

6.11.5 Rotated component matrices (Rounds 1 – 3)

The idea of rotating the component matrix in the rotated component matrix table is to reduce the number of factors and limit them to only those with high loadings (Chetty and Datt, 2015). In fact, rotation is only re-ordering and does not change anything (Chetty and Datt, 2015). The factors with higher loadings can be used for further analysis (Chetty and Datt, 2015). This helps to group the different items with the components to which they belong (Educresem, 2014). The varimax rotation (part of orthogonal rotation) was used in this study. Varimax rotation attempts

to minimize the number of variables with high loadings on each factor (Educresem, 2014). This improves the interpretability of the factors.

The question loadings on components are detailed in Annexure 10 and summarised in Table 6.84 below. Due to the items loading onto too many components, the researcher presents in Table 6.84 below only components related to transformative learning i.e. disorienting dilemma, critical reflection, reflective discourse and action.

Table 6.84: Summary of rotated component matrix - Transformative Learning

	Disorienting Dilemma	Critical Reflection	Reflective Discourse	Action
Round 1	DD1, DD2, DD3, DD4	CR2, CR3,CR1, CR4	RD1, RD2, RD3, RD4, PF8	A1, A2, A4, A3
Round 2	DD2, DD4, DD3, DD1, PF7	CR1, CR2, CR3, CR4	RD2, RD3, RD4, RD1	A2, A1, A3, PF8, A4
Round 3	DD2, DD3, DD4, DD1	CR1, CR4, CR3, CR2	RD1, RD3, RD2, RD4	A2, A1, A4, A3, PF8

From the table above it can be seen that items loaded together to components in line with the transformative learning stages in the theory and the questionnaire. Items numbered DD1 to DD4 related to disorienting dilemma, items CR1 to CR4 related to critical reflection, items RD1 to RD4 related to reflective discourse, items A1 to A4 related to action and lastly, all PF items related to personal factors. In Round 1 under reflective discourse, a personal factor item PF8 (*I have the right experiences to start a business*) also loaded, albeit with a low loading of 0.370. This item did not load with the same component in Rounds 2 and 3. In Round 2 under disorienting dilemma, a personal factor item PF7 (*I'm the right age to be in business*) also loaded with a comparatively low loading of 0.453. This item did not load with the same component for Rounds 1 and 3. Under the action component, a personal factor question PF8 (*I have the right experiences to start a business*) loaded in Rounds 2 and 3, but not in Round 1.

Other results from the component matrix are with regard to personal factor items. These are presented in Table 6.85.

Table 6.85: Summary of rotated component matrix - Personal factors

	Entrepreneurship Enablers	Individual Traits	Religion & Culture	Family	Belief about Entrepreneurship	Other
Round 1	PF1, PF2, PF5, PF11	PF9, PF6, PF7	PF4, PF3	PF12	PF10	PF13
Round 2	PF4, PF3, PF6, PF5	PF13, PF11, PF9		PF12, PF10		PF2, PF1
Round 3	PF1, PF3, PF5, PF4, PF2	PF7, PF11, PF9		PF12	PF13, PF10	PF6

From the table above it can be seen that only 2 components load reasonably well in all the rounds i.e. entrepreneurship enablers and individual traits. The rest do not load consistently from one round to the next. This means these relevant items may not be measuring the personal factors they are supposed to measure. In any future studies those items should be re-examined with the intention of either leaving them out of the questionnaire completely or treating them as independent variables.

6.12 PREDICTORS OF INCREASE IN ESE

From the research it was found that there are factors that can predict the level of increase in ESE experienced by a person as a result of the training. These factors, according to this research, can be classified into environmental factors, personal factors and family factors. Under environmental factors are items such as faith in government policy, the culture and religion a person belongs to and attitude about the media. Personal factors include family support, age, personal experiences and attitude towards other entrepreneurs. Family factors refer specifically to whether "There is somebody in [the] family that owns their own business".

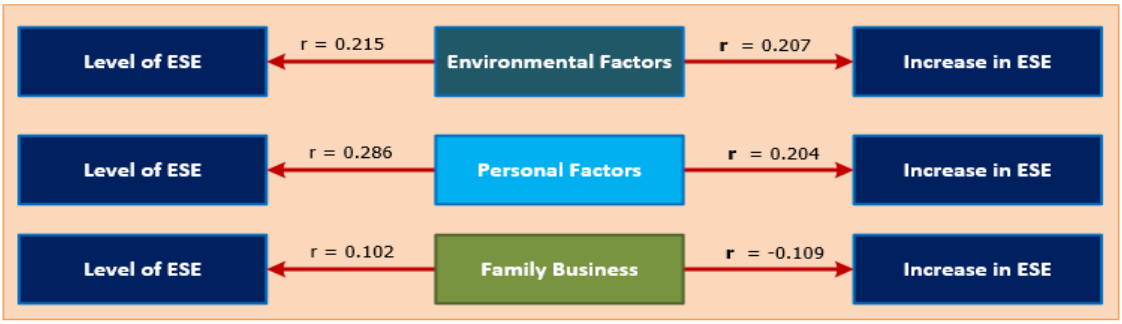
A correlation between these factors and ESE was computed before the SHAPE programme and then a correlation between these factors and ESE was also calculated. The results are presented in Table 6.86.

Table 6.86: Correlation between ESE and measured factors

Factor	ESE Score 1	ESE Increase
Environmental Factors	0.215	0.207
Personal Factors	0.286	0.204
Family Business Ownership	0.102	- 0.109

From the table above it can be seen that there was a positive correlation between environmental factors and ESE, another positive relationship between personal factors and ESE and lastly, family business ownership is also positively related to the level of ESE score. However, unlike the other two factors, there is a negative relationship between the increase in ESE and family business ownership, albeit small. These relationships are illustrated in Figure 6.28 below.

Figure 6.28: Correlations between specific factors and ESE



The figure above illustrates that environmental factors and personal factors can predict the level of ESE and the ultimate increase in the level of ESE experienced by an individual due to training. Coming from a family business environment is a poor predictor of the level of ESE and the increase in ESE. Pursuant to this, the transformative learning theory is fitted to the SHAPE programme in section 7.4 and the TESE model is proposed for a fundamental transformation in ESE in section 7.5.

6.13 SUMMARY OF STUDY PROBLEM AND FINDINGS

This research sought to investigate the influence of aspects of transformative learning theory, namely significant experience, critical reflection, rational discourse and action when applied to developing elements of youth entrepreneurial self-efficacy. This was achieved by using a longitudinal study of the SHAPE training program that was carried out at the University of KwaZulu Natal. Participants in the programme completed the same research instrument three times; before the programme began in week 1, in week 7 and in week 13 (at the end of the programme).

There was a significant change to participants' entrepreneurial self-efficacy (ESE) in the context of transformative learning theory. This means that at the end of the programme, participants tended to respond more positively "Moderate Extent" and "Great Extent" to the various aspects of ESE than before they attended the SHAPE training programme. This means that the SHAPE training programme was effective in increasing positive responses with regard to ESE as explored through the lens of the transformative learning theory. It can be inferred from these results that there was transformation in the sense of an increase in developmental maturity (Fitch & O'Fallon, 2013). Or it can be legitimately be argued that from the results, the SHAPE programme participants had transformative experiences (Heddy and Pugh, 2015) (refer to section 4.5.2.)

These positive results are consistent with a research conducted by Elert et al. (2015), who found a positive relationship between a high school entrepreneurship education program and the probability of starting a firm. Also consistent with these research results is a study by Rauch and

Hulsink (2015), which showed an increase in entrepreneurial attitudes and perceived behaviour control by participants.

However, the results from this research differ from findings by Mentoor and Friedrich (2007), which showed no change in entrepreneurial orientation and achievement orientation, plus a reduction in self-esteem after university students took an entrepreneurship module. These findings also differ from findings by Steenekamp (2013) in his study of entrepreneurial attitudes, entrepreneurial intentions, adaptive cognition and innovative skills among high school learners. Steenekamp (2013) found no improvement in the studied dimensions.

The difference between the findings of this study and those of Mentoor and Friedrich (2007) could be because the nature of the programmes being evaluated was fundamentally different. Mentoor and Friedrich (2007) investigated a formal university module that was compulsory among most of their respondents. The SHAPE programme was completely voluntary and participants self-selected to attend the programme. This could mean that a significant number of respondents in Mentoor and Friedrich's (2007) study were not interested in entrepreneurship, while participants in the SHAPE programme were obviously interested. While the majority of the teaching in the programme studied by Mentoor and Friedrich (2007) was by a single lecturer, the SHAPE programme was mostly conducted by guest speakers with experiences in entrepreneurship.

The SHAPE programme was also different from the Junior Achievement Programme studied by Steenekamp (2013). The Junior Achievement Programme targets high school students, while the SHAPE programme targets university students. The mere differences in age could be driving the differences in impact. University students might have had more time to explore various career options and begun to consider entrepreneurship as a viable option and as such are more open to entrepreneurship. On the other hand, high school students may have participated in the Junior Achievement Programme as one of those school activities whose value is uncertain in their future life.

The findings from this research also differ from a study of Israeli high school students by Bergman et al. (2011). They found that while boys' ESE increased, girls had their ESE reducing. In this study, the difference between males and females had disappeared by week 7 of the study for all ESE dimensions (refer to section 6.10.). The differences in gender outcomes between this study and Bergman et al. (2011) could be attributable to the fact that females who participated in the SHAPE programme were more mature and had made an active choice to participate. There is a significant influence of parents, teachers and guardians to high school children's choices of whether or not to participate in any programme. This could mean the females who participated in SHAPE are, to an extent, different from the females in Bergman et al.'s (2011) study.

Although the analysis of the results indicated an increase in positive responses with regard to ESE, it should be highlighted that the SHAPE programme was not effectively set-up to indicate that transformation in terms of a shift in the basic premises of thought, beliefs and assumptions (Mezirow, 1991) had occurred. It was more to provide transformation in the sense of an increase in developmental maturity (Fitch & O'Fallon, 2013). Alternatively, it can be argued that it was more oriented towards providing students with transformative experiences (Heddy and Pugh, 2015). This is similar to numerous other entrepreneurship courses and programmes whose main focus is to provide students with information (Radipere, 2012; Van Der Westhuizen, 2017). Pursuant to this reality, this study fits the transformative learning to the SHAPE programme in section 7.4. and then proposes a new transformative entrepreneurial self-efficacy model in section 7.5, which would achieve psychocritical transformation (Hoggan, 2016).

6.14 CONCLUSION

This chapter analyses the data for the main longitudinal study. The majority of the participants in all the rounds were female, around 56% in all rounds. This is consistent with the gender distribution of the university students in South Africa (Council of Higher Education, 2017). The number of people who gave positive responses i.e. "Moderate Extent" and "Great Extent" increased for all the questions, while those with negative responses reduced when compared to the beginning of the SHAPE programme. The reliability of the questions was tested using Cronbach's alpha and the results indicated that all the factors in the study for all stages were reliable. Tests for normality using Kolmogorov-Smirnov and Shapiro Wilk tests revealed that most of the data were not normally distributed, leading to the use of non-parametric tests for further analysis. The questions loaded strongly to relevant transformative learning factors but not for personal factors. The Mann Whitney U test indicated that there was no statistically significant difference in scores between males and females for Rounds 2 and 3. The only significant difference was in Round 1, specifically for disorienting dilemma, critical reflection and action. In the final analysis, there was a statistically significant improvement in ESE that can be attributed to the program, based on the results from hypothesis testing using the repeated test ANOVA. In light of this, it can be argued that the SHAPE programme achieved, at least, increased developmental maturity for the participants and they also had transformative experiences. Despite these positive results, it is remains indeterminable whether or not transformation in the sense of fundamental change in basic premise of thought occurred. This is why in the next chapter the SHAPE programme is fitted into the transformative learning model (section 7.4.) and a new TESE model is proposed (section 7.5.).

CHAPTER 7 :
CONCLUSION

7.1 INTRODUCTION

This chapter provides an overview of the research objective of this study and discusses the findings. It reviews each question and hypothesis in light of the overall goal of transformation. From this review of the results, the SHAPE programme is fitted into the transformative learning theory model. Thereafter, a new TESE model is proposed as a way to develop a training programme that can achieve fundamental transformation of ESE and not just increase in developmental maturity. This is followed by a summary of the research process and what each chapter sought to achieve. Thereafter, the chapter provides recommendations for future studies and further actions.

7.2 ACHIEVEMENT OF RESEARCH AIM

This research sought to **evaluate student transformation after training and propose a model for transformative learning that can be applied to develop elements of ESE** (opportunity identification self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy). From the longitudinal study conducted on the SHAPE training programme, it was clear that there was an improvement in the various elements of entrepreneurial self-efficacy among the participants. Interestingly, in week 7 of the 13 week training programme, the differences in ESE between males and females had disappeared; the differences were no longer statistically significant. This is clearly contrary to several previous studies (Bergman et al., 2011; Gupta et al., 2009; Shinnar et al., 2014).

There are two explanations proffered for this. The first is that the instructor of the programme was female, which could have made the programme a little more attuned to female participants' needs. The second potential explanation is that the programme also made use of female entrepreneurs who presented different topics. This could have reduced the male stereotyping of entrepreneurship among female participants (Sweida and Reichard, 2013).

The explanations provided above regarding the change in females need further specific research in order to be either supported or disconfirmed. Further research could compare the impact of male and female entrepreneurship instructors. Another area for further research could be the influence of the gender of an entrepreneur presenter on participants.

Although this research showed a statistically significant improvement in ESE, it did not effectively evaluate if there was a change in the participants' beliefs (transformation). For an

improvement to be transformative, it must be accompanied by a fundamental shift in basic premises of thought, feelings, and actions that dramatically and irreversibly alters a person's way of being in the world (Transformative Learning Centre, 2016). However, the research results showed transformation in the sense of an increase in developmental maturity (Fitch & O'Fallon, 2013) or providing transformative experiences (Higgins, 2013).

This indicates a need for a training model that can prove the transformation of participants. This is the reason for the new model, the Transformative Entrepreneurial Self-Efficacy (TESE) model that is presented below. A model where transformation is likely to occur and transformative learning can actually be measured.

If one of the key student needs from entrepreneurship training is transformation (Gedeon, 2017; Chimucheka, 2014), it is important to test if transformation has occurred after the training. Entrepreneurship training should be characterised by the testing of participants' assumptions on entrepreneurship at the beginning and end of the programme, plus preferably 6 months after the cessation of the programme (to test the durability of the change).

The next section provides a summary of the research process that was followed.

7.3 RESEARCH QUESTIONS, SUMMARY OF FINDINGS AND RECOMMENDATIONS

In Chapter 1 it was argued that entrepreneurship education in South Africa is overly theoretical (Radipere, 2012) with emphasis on "How-to", which makes students more reactive and less proactive (Van der Westhuizen, 2016). The overall problem is that such education is not resulting in higher TEA, higher ESE or greater EI (Herrington and Kew, 2016; Shay and Wood, 2004). For entrepreneurship education in South Africa to be effective, there is a need to focus on developing the competencies, skills, aptitudes and values necessary to initiate entrepreneurial businesses (Jesselyn and Mitchell, 2006). To resolve these problems, this research proposed that there is a need to transform the way in which teaching and learning is undertaken in order to develop students' ESE. More specifically, it aimed to **investigate the way in which the transformative learning theory can be used to develop different elements of ESE**. This was achieved by researching the questions that are discussed below.

7.3.1 Research Question 1: To what extent does disorienting dilemma (significant experiences) develop ESE?

In line with the above question, it was hypothesised that:

H^1: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **disorienting dilemma** following their attending the SHAPE training program.

This research rejected the null hypothesis and found that participants' ESE increased significantly due to the disorientation induced by the programme from weeks 1 to 6. However, there was no significant change from week 7 to week 13. No similar research had been conducted previously that specifically explored the effect of disorienting dilemma on ESE. However, in disorienting dilemma research a number of scholars have explored disorienting dilemma as a non-determining start to transformative learning (Mälkki, 2012; Nohl, 2015; Roberts, 2013), while others have explored disorienting dilemma as a trigger for critical reflection (Jarvis et al., 2003; Mezirow, 2000b; Mezirow and Marsick, 1978).

Due to the nature of the SHAPE programme, this study treated disorienting dilemma as "important experiences". This substitution of 'disorienting dilemma' with 'important experiences' created a mismatch in that many important experiences are not necessarily disorienting dilemmas, as the latter is associated with questioning underlying assumptions (Mezirow, 2000a; Mezirow and Marsick, 1978). To trace actual disorienting dilemma, this research, in section 7.5., proposes use of the transformative entrepreneurial self-efficacy (TESE) model.

7.3.2 Research Question 2: To what extent does critical reflection develop ESE?

In line with the question above, it was hypothesised that:

H^2: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **critical reflection** following their attending the SHAPE training workshop.

This research rejected the null hypothesis and found that participants' ESE increased significantly due to the critical reflection induced by the programme from weeks 1 to 6. However, there was no statistically significant change from week 7 to week 13. No previous research had been conducted to specifically explore the effect of critical reflection on ESE. However, important in the research into critical reflection is the distinction between critical reflection, process reflection and content reflection (discussed in section 4.5.5).

This study asked respondents directly if they had recently *"critically questioned [their] beliefs or assumptions about starting or owning a business..."* This line of questioning was unlikely to lead

to critical reflection, that is, a serious exploration of underlying beliefs and assumptions. This is another reason for this research proposing the TESE model in section 7.4, as it provides a systematic way of performing critical reflection through guided journaling or guided meditation.

7.3.3 To what extent does reflective discourse develop ESE?

In line with the question above, it was hypothesised that:

H^3: There is a significant change to participants' **entrepreneurial self -efficacy** (ESE) due to **reflective discourse** following their attending the SHAPE training workshop.

This research rejected the null hypothesis and found that participants' ESE increased significantly due to reflective discourse conducted during the programme. Previous research did not specifically explore the role of reflective discourse in ESE. Reflective discourse is about weighing the evidence of your underlying assumptions through dialogue with other parties (Mezirow, 2003) but this is not always necessary for transformative learning to take place (Dix, 2016).

To evaluate reflective discourse, this study asked respondents if they "*had an in depth discussion with someone in which [they] questioned the way [they] think..."* As in-depth discussion and reflective discourse are not exactly the same, to keep the fidelity with reflective discourse as envisioned by Mezirow (1990), the TESE model (section 7.4) proposes an in-depth interview technique as a way to encourage reflective discourse.

7.3.4 Research Question 3: To what extent does action develop entrepreneurial self-efficacy?

In line with the question above, it was hypothesised that:

H^4: There is a significant change to participants' **entrepreneurial self-efficacy** (ESE) due to **action** following their attending the SHAPE training workshop.

This research rejected the null hypothesis and found that participants' ESE increased significantly due to action taken during the SHAPE programme. Previous research did not specifically explore the role of action in ESE. However, it highlights that a high level of desire does not automatically lead to entrepreneurial action (Brännback and Carsrud, 2017; Iwu et al., 2016). Researchers such as Brännback and Carsrud (2017) propose that there is a need for a non-volitional push to convert intentions into entrepreneurial action.

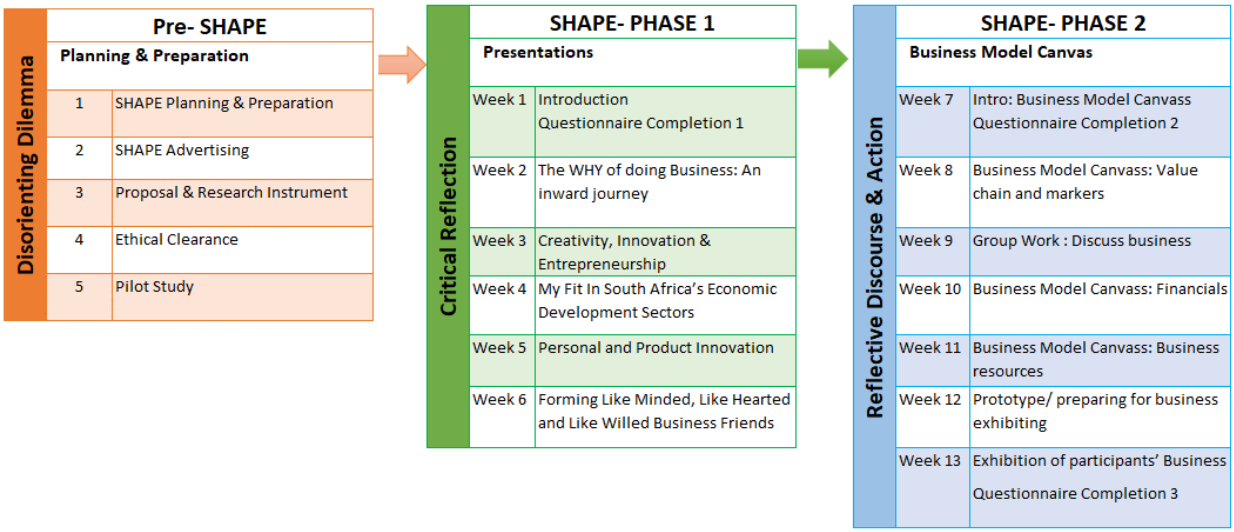
To evaluate if action from the SHAPE programme increased ESE, this study asked respondents if they "*act in a way which can help [them] identify opportunities..."* It is apparent that this type

of question elicits hypothetical answers that might not stand the test of real entrepreneurial action. This is why the TESE model below proposes prototyping, that is, students taking steps to evaluate their idea while they are still under training. They can then build on such action to initiate a business based on the work they have done during training.

6.4 FINDINGS ON SHAPE PROGRAMME AND THE TRANSFORMATIVE LEARNING THEORY MODEL

If the SHAPE programme is considered in light of the transformative learning theory, it would be divided into three phases, namely pre-SHAPE, SHAPE Phase 1 and SHAPE Phase 2. During pre-SHAPE the students experienced a disorienting dilemma that causes them to be interested in entrepreneurship and pre-disposes them to applying for the programme when they see the advertisement. The presentations in phase 1 make them critically reflect on their underlying assumptions about entrepreneurship. This critical reflection prepares them for reflective discourse and action in phase 2 of the programme. This process is illustrated in Figure 7.1.

Figure 7.1: Transformative Learning Theory and SHAPE programme



The figure above indicates that the SHAPE programme can be roughly mapped to the transformative learning theory. Transformation that was achieved in terms of SHAPE was an increase in developmental maturity (Fitch & O'Fallon, 2013). SHAPE has proved that there is a positive relationship between ESE and environmental factors, personal factors and family business factors, as shown in Figure 7.2 below.

Figure 7.2: Correlations between specific factors and ESE*

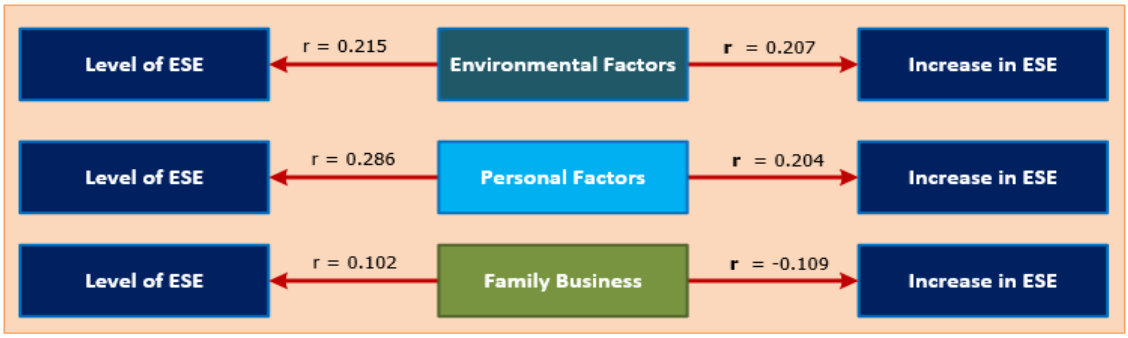


*Figure 7.2. Repeated from Chapter 6, for convenience

Notwithstanding the success of SHAPE in increasing developmental maturity, it does not prove that there was a transformation in terms of "a deep, structural shift in basic premises of thought, feelings, and actions" (Transformative Learning Centre, 2016). To achieve that, there is a need to pay closer attention to the development of the training programme with specific focus on transformation and ESE. The programme that will most likely lead to the fundamental transformation of beliefs should follow the TESE model, which is discussed next.

7.5 CONTRIBUTION TO THEORY AND PRACTICE: THE TESE MODEL

The TESE model is proposed as a result of the findings of this research and the gaps in both the transformative learning theory and ESE literature. The recurring issue in the previous section is that with the SHAPE programme, although designed and implemented much better than other entrepreneurship courses, it was impossible to ascertain whether or not fundamental transformation occurred. That is transformation in the sense of participants changing their beliefs, frames of reference or premises of thought with regard to their ESE.

This is consistent with challenges cited in transformative learning theory literature. Kegan (2000) sums the problem thus, educators interested in transformation need to better understand their students' current epistemologies in order to create appropriate learning designs. Based on academic enquiry and to the best of the researcher's knowledge, no entrepreneurship program attempts to understand students' current epistemologies or assist students to understand their own theory in use.

In entrepreneurship research, Brännback and Carsrud (2017) highlight that knowledge and intent do not translate into entrepreneurial action. There is a need for a non-volitional event to transform intention into action (Brännback and Carsrud, 2017; Iwu et al., 2016). What if there is no event that forces someone into entrepreneurship? Does it mean all the education and learning is wasted?

All entrepreneurial education should be aimed at transforming students and orienting them towards entrepreneurial action (Gedeon, 2017).

The TESE model proposes that transformation of ESE occurs in three stages, namely early transformation, middle transformation and late transformation. These stages are explained as follows:

7.5.1 Early Transformation Stage

The early transformation stage is characterised by four progressive steps, namely inert ESE, disorienting dilemma, information search and qualifying. These steps are discussed briefly below.

7.5.1.1 Inert ESE

Nobody begins the entrepreneurial learning process as a blank slate. Their beliefs about entrepreneurship and their own ESE are strongly influenced by demographic and psychographic factors (Fatoki, 2010). Demographic factors include factors such as family background, previous employment, education, race and cultural background (refer to section 6.12). Psychographic factors refer to personal characteristics that influence an individual's desire to become an entrepreneur (Fatoki, 2010). These factors are discussed in detail in section 2.7. These factors determine what triggers disorientation in a person, which is the next step.

7.5.1.2 Disorienting Dilemma

Interest in increasing entrepreneurial skills, and in a way ESE, can be triggered by a sudden event such as retrenchment or it can develop gradually, for instance by grappling to come to terms with someone else's unemployment (Mälkki, 2012). In this study one male respondent became interested in entrepreneurship after being *"unemployed for 13 years after matric and not studying and not finding a job"*. Looking at the results from the first round of this research, approximately 20.8% were gradually disoriented to become interested in entrepreneurship. This stemmed from activities such as employment experiences and with approximately 7% of the participants, through selling items part time. From the same data, approximately 12.5% of the first round respondents became interested in entrepreneurship due to significant life events such as business failure or a death in the family.

7.5.1.3 Information Search

Once one has suffered some disorientation, one either actively or passively searches for information to increase one's skills. Disorienting dilemma leads to a phase of 'undirected and experimental inquiry' (Nohl, 2015:5). In the context of this study, that is when they would have

been interested in responding to an advertisement for the SHAPE course. In addition to the SHAPE course, they would possibly have enrolled for an entrepreneurship management module at the university and any other activity to attempt to pacify the disorientation experienced.

7.5.1.4 Qualifying

This research proposes a qualifying phase before an individual begins their entrepreneurship training. Numerous academic entrepreneurship programmes qualify students in the sense of academic pre-requisites. However, any training should commence with a process of identifying a person who is likely to succeed as an entrepreneur (ERC, 2011). The SHAPE programme had a pre-requisite that an applicant needed to be in at least his/her third year of study.

Qualifying in terms of this TESE model involves testing students for entrepreneurial traits and experiences before they are accepted. These traits include demographic factors, psychological and psychographic factors (Fatoki, 2010). A person with sufficient levels of these traits would then be accepted to the entrepreneurship development programme. This qualification process helps ensure the programme is pitched at the right level. Results from this research backs this kind of thinking by indicating that some people did not experience any statistically significant improvement in their ESE, notwithstanding 3 months of training. Qualifying them would help avoid the ineffective large classes that currently characterise entrepreneurship programmes at universities (Mentoor and Friedrich, 2007; Davies, 2001).

7.5.2 Middle Transformation Stage

The middle transformation stage is characterised by four progressive steps, namely critical reflection, training or study, reflective discourse and prototyping or testing. These steps are discussed briefly below.

7.5.2.1 Critical Reflection

The reality is that not everyone can perform critical reflection (Bee, 2000), as a person needs to be at a certain level of cognitive maturity for critical reflection (Merriam, 2004). An educator needs to guide people into critical reflection through guided reflective journaling or guided meditation.

Journaling has been found to assist students reflect and articulate their thinking, assist in acquiring meta cognitive skills and help students to make conceptual or perceptual changes visible (Dunlap, 2006). It has also been found to be an effective teaching or learning method to develop critical thinking (Padden-Denmead et al., 2016). In guided journaling, the educator designs questions for students to reflect on their beliefs and assumptions about their own ESE. These questions can

centre on the elements of ESE, that is, opportunity recognition self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

Meditation can be described as purposefully paying attention to the present moment non-judgementally (Bowen et al., 2013). It has been shown to be effective in several scenarios, such as stress reduction, treatment of substance abuse and in post suicide survivors (Bowen et al., 2013). Fundamentally, it assists an individual to be able to detach the relationship between thoughts and feelings, which is key to preventing an escalation of negative thought patterns (Bowen et al., 2013). Guided meditation is when a person is first put into a relaxed state, usually through focusing on breathing, and guided by a narrator to elicit a certain response or change (DiMartile, 2016).

As in guided journaling, the students could be guided to identify their underlying beliefs about the various elements of ESE. After the guided meditation, the students can then document their guiding beliefs about those elements. Unlike journaling, it is important to note that guided meditation should be undertaken by a trained individual, in order to do it the correct way and to elicit the desired outcomes. Guided meditation needs some training for the students on the meditation method to be used (Tang et al., 2007).

7.5.2.2 Training or Study

The focus of entrepreneurship education should be student transformation, focusing on changing knowledge, skills and attitudes (Gedeon, 2017). It should be noted that the key expectations by students when attending an entrepreneurship programme can be narrowed down to assistance to initiate a new business and developing the relevant skills to manage the same or become employable (Chimucheka, 2014). Unfortunately, in the South African context, research into entrepreneurial education efficacy is limited (Chimucheka, 2014).

In this research, the key aims of the SHAPE programme are to encourage participants to consider entrepreneurship as an alternative to formal employment and also increase their ESE (Van Der Westhuizen, 2018). The SHAPE programme was successful in providing learners with transformative experiences that led to increased developmental maturity, but was not structured effectively with regards to the key ESE elements. Most of the ESE elements might have been covered by different speakers, albeit haphazardly, as this was not a focus area.

In light of the above critical analysis, this research proposes that the content for every entrepreneurship programme should be steeped in entrepreneurship theory. In other words, if the aim is to increase ESE, special attention should be paid to the elements of ESE so that it is clear what needs to be achieved. A generic presentation, even if it is by an entrepreneur, could be

relevant, but not as effective, unless the presenter was clearly guided as to what entrepreneurial outcomes the programme intended to achieve through their presentation.

The TESE model proposes that all content for an entrepreneurship programme whose aim is transformation should be structured around ESE elements. For instance, there would be a lecture about opportunity recognition. This can be supported by students reading about the same. The programme should then identify a successful entrepreneur who exploited an opportunity and ask them to speak on that same issue. The entrepreneur could share his/her experiences in areas such as, the way in which they identified the opportunity, the way in which they validated the opportunity and the way in which they exploited it. The external presenters would be given a guide as to what they need to cover in their presentation. This approach would be applicable to all the elements of ESE covered during the training programme.

7.5.2.3 Reflective Discourse

The reality is that it is unlikely that transformation will occur without reflective discourse (Feinstein, 2004). This is because it is only through reflective discourse that a person can identify and critically evaluate their own assumptions. However, the concept of classroom discourse is only partially understood (Walsh, 2011). There is a need to ensure that educators and students develop a deep interactional competence that will lead to students being actively involved in the learning process (Walsh, 2011). The challenge with reflective discourse is that it attempts to test the truth and appropriateness of one's thinking and the authenticity of one's feelings in relation to the perceived credibility of the other party in the discourse (Mezirow, 1991). This is difficult to achieve in a classroom set-up. In most classroom discussions the educator or others assume an authoritative position and judges what is right or wrong (Van Zee and Minstrell, 1997).

In the SHAPE programme Session 9, students were placed in groups to discuss their business ideas. The intention was for them to share their entrepreneurship journeys thus far. There were two main challenges with that approach. Firstly, students were not prepared enough to understand the way in which the discussion should progress. Those discussions were either dominated by a limited number of people or were too superficial to be of any value. Secondly, there were too many students in the programme, which made it difficult to provide enough guidance on the way in which the discussion should work.

In light of this challenge, this research proposes reflective discourse through interviewing and storytelling, which is consistent with global trends (Cranton and Taylor, 2011). In the TESE model students are tasked to interview at least one entrepreneur whose business is still operating. They are also supposed to interview at least one entrepreneur whose business failed. The students should prepare for these interviews and focus on the underlying beliefs that the entrepreneur holds

and attributes to his/her success. The focus on underlying beliefs is to help the student identify relevant beliefs either lead to, or prevent success. When a learner listens to entrepreneurs' stories, this could lead them to challenge a number of long-held values and assumptions (Kroth and Cranton, 2014).

Thereafter, the students should be divided into small groups of 5 people or fewer to interview one another. These interviews would be conducted using an interview guide. The focus of these interviews would be to encourage the students to critically evaluate their own underlying assumptions and beliefs about the various elements of ESE. An interview approach is recommended as it is the researcher's view that many people will not be upfront about their underlying beliefs in a classroom setting unless probed. The interview approach would allow other participants in the group to probe deeper into the student's beliefs in order to surface them.

Before the interviewing session, students should be advised that their role in the interview process is not to question the underlying beliefs of the interviewee, but only to surface and make the interviewee aware of them. They would also be encouraged to gently probe these beliefs so that the interviewee clarifies them in his/ her mind. The guide to a maximum of 5 people in a group is to minimise stage fright, which could prevent the students from disclosing their underlying beliefs.

7.5.2.4 Prototyping and Testing

A key contributing factor why businesses fail is because they are launched prematurely without understanding customer needs (Glauser and Holland, 2016). Prototyping in entrepreneurship education should therefore aim at quickly putting together working models (prototypes) and gathering customer feedback (Noyes, 2018). The primary purpose of prototyping is to evaluate what the customer's value, which the entrepreneur can quickly act upon (Noyes, 2018). This helps students to evaluate business opportunities through quick customer feedback (Noyes, 2018). In general, prototyping is part of experiential learning, which provides students personal experience that can sustain learning (Mandel and Noyes, 2016). This learning from experience is vital for entrepreneurs. Gabrielsson and Politis (2011) found that acceptance of failure is correlated with initiating future ventures.

In this research, the SHAPE programme has preliminary elements of prototyping through the use of the business model canvass. Sessions 7 to 12 of the programme are oriented towards the creation of a business model canvass. The business model canvass is a cost effective teaching tool to help students to understand business models better (Joyce and Paquin, 2016). Students were supposed to complete and submit their business model canvass in order to qualify to receive a certificate.

To improve the prototyping process, the TESE model proposes a two-step process. The first step is making sure that every student completes a business model canvass for the product or business they wish to start. Only if two students plan to launch a particular business together should they work in pairs or teams. Completing a business model canvass should not be undertaken superficially. Students should embark on proper research into the business they wish to launch. This research should include a study of businesses in the same category and the way in which they acquire customers. Ideally, the student should take this a step further, by interviewing business owners in the same category.

Once the business model canvass is completed, students are placed in work groups again. In these groups they interview one another about their businesses. The aim of these interviews is to help the interviewee clarify their thoughts and potentially help them identify the strengths and weaknesses of the business. It should be highlighted to the interviewers that the intention is not to criticise or provide answers to the student. The intention is to help the student think through their business idea. The questions should be with regard to ESE elements. The following are examples of relevant questions: How much potential does the opportunity have in terms of sales/ revenue? How do you plan to exploit the opportunity? What relationships do you need to build in order to make your business successful? How are you planning to acquire the managerial competencies required to make the business a success? How are you going to minimise the risk of business failure? After the interview, the student revises the business model canvass and takes the next step, to test the market.

Testing the market should be achieved as cost effectively as possible. Testing the market is an initial test of the hypothesis i.e. the business idea. Best-case scenario, the student needs to make appointments with potential customers and interview them about the problem his/her product is attempting to solve. Ideally, the student should interview approximately 100 potential customers, depending on the product. These customer interviews need not be too long or in person. Telephonic interviews can work as well. Another means of testing is by running a small advertisement on an online platform such as Facebook, Gumtree or Google Ads. The student can simply run a survey specifically asking questions with regard to the problem his/her product is planning to resolve.

After this customer research, the students can refine their business idea based on the feedback they receive from potential customers. They can do so by revising their business model canvass or present a write-up about their findings. The specific focus in this write-up is for them to come up with a customer prototype i.e. a person who is likely to buy their product and also to clarify the specific problems that their customer prototype is facing. If the customer interviews have been done well, the student should by now be clear about the product, the potential customer, where to

advertise, the appropriate language to use and the expected delivery. This places the student in a better position to perform a lean start-up.

7.5.3 Late transformation stage (Action)

The late transformation stage refers to when the business engages in the formal start-up processes. It is at this stage that the business officially starts up e.g. the business is registered. The lean start-up process is recommended and is discussed briefly below.

7.5.3.1 Lean Start-Up

The TESE model proposes the first step in late transformation is to be seeking initial funding; usually from personal sources such as savings, family and friends. Personal finance sources are mostly recommended for this stage. This is because it is easier to raise money from personal connections when the business is still unproven.

The financing that is obtained is used to acquire or make minimal investments into the product and to market it. At this stage, the product's core functionality is built and promoted. The reason is to minimise investment and shorten the time to market. The business is still attempting to prove that the idea is viable and that customers will pay for the minimally functional product. The business is also gaining more insight into the market and building a track record among customers and financers.

Early customers should come from the entrepreneur's close connections and/or the people the entrepreneurs interviewed during market testing. Once the business' customer base and revenue have begun to grow, the business can formally apply for funding from commercial sources and move to step 2 of late transformation.

7.5.3.2 Business Building

During the business building stage, the entrepreneur should improve and refine his/ her product. This is achieved by actively seeking customer feedback. The entrepreneur should formally request for feedback from clients on an ongoing basis. This feedback is recorded, evaluated and classified according to specific themes. The student can also observe customers using the product in order to gain a good understanding. The feedback obtained is prioritised based on the number of customer feature requests and the cost of the enhancement.

During the business building stage, intense marketing should be used to enhance the chances of success. At this stage the entrepreneur should become less involved in the operations. He should have outsourced some of his operational responsibilities or delegated them to lower levels. The

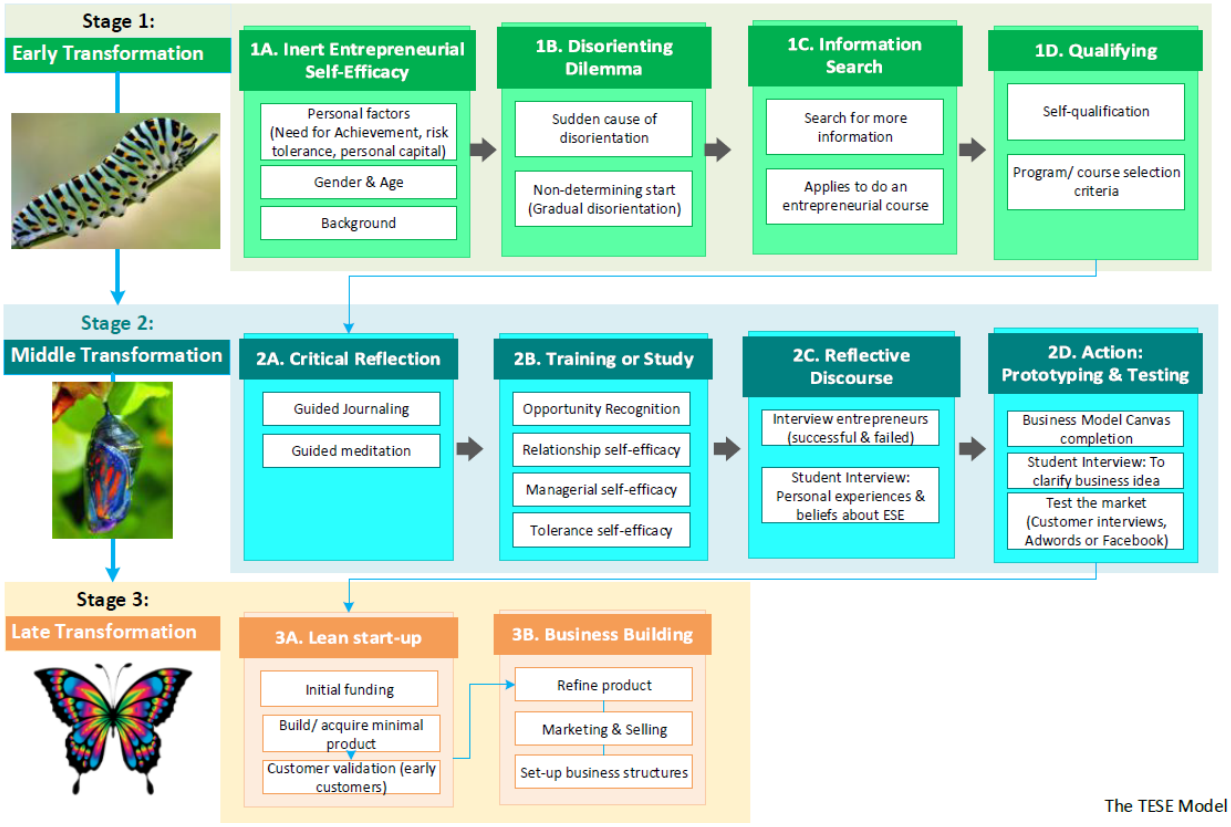
focus at this stage is on growing the market share and designing and implementing business strategies.

During business building, the structure of the business should be finalised. This should be in line with the strategy being pursued. Also at this stage, the focus of the entrepreneur should be on acquiring managerial skills in different areas of the business, such as finance, marketing and human resources. These become more important as the business employs more people and needs to deal with more compliance laws.

It is recommended that those entrepreneurs at this late transformation stage of the business should actively explore joining an incubator. This is based on research conducted by Lose et al. (2016) on businesses in incubation, which found significantly positive results about businesses in incubation programmes (refer to section 2.10.5). During the late transformation stage, the business should remain open to evaluating its underlying assumptions. This trait is the source of long-term business survival, especially in the current rapidly changing environment.

The TESE Model stages are graphically illustrated in Figure 7.3 below.

Figure 7.3: The TESE Model



The TESE Model

*Images of butterflies obtained from www.pexel.com (under free license)

7.7 ADDITIONAL CONTRIBUTION TO THEORY AND PRACTICE

The study proposes a new model in entrepreneurship learning, the TESE model, which builds on both the transformative learning theory and ESE theory. It provides a pathway an individual can follow in order to be transformed from low ESE to a point where he or she is sufficiently confident to take entrepreneurial action. In addition to the TESE model, the contribution of this study can therefore be split into contribution to theory and contribution to practice.

7.7.1 Contribution to Theory

This study explored entrepreneurship training through the lens of the transformative learning theory. It placed the transformation from student to entrepreneur at the core of entrepreneurship training. According to Chimucheka (2014), students in South Africa enrol in entrepreneurship courses to be able to launch their own businesses. On the contrary, the South African entrepreneurship curriculum is mostly theoretical and developed by academics along with other theoretical courses (Mentoor and Friedrich, 2007). While the study by Van der Westhuizen (2016) highlights the need for transformation through connecting to the deeper self, this study takes this a step further by providing a process for ESE transformation.

The study also proposes that the training of entrepreneurs should be based on entrepreneurship theory and not management theory. The TESE model focuses on ESE dimensions, namely opportunity recognition self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy. This means that for an entrepreneurship programme to be transformative, it should no longer focus on providing students with more information, but rather specific information targeted at elements that lead the student to be ready to take entrepreneurial action.

Current entrepreneurial literature is dominated by models and stories of successful entrepreneurs. This is notwithstanding the reality that the majority of entrepreneurs fail and the percentage of failure is South Africa is a staggering 71% in the first year (Burger, 2016). The contribution of this study through the TESE model is that, as part of reflective discourse, there is a need to interview failed entrepreneurs. These failed entrepreneurs would help the student realise where things can go wrong and hopefully enable them to avoid the same pitfalls in their own quest. Anyone who wishes to be an entrepreneur needs to learn from the mistakes of failed entrepreneurs.

The study also highlighted that transformative learning is not a destination, it is an ongoing life journey. In the late transformative learning stage of the TESE model, the entrepreneur should cultivate the business habit of always evaluating underlying assumptions to increase the chances of long term business survival, especially in the current rapidly changing business environment.

This is contrary to transformative learning literature, which assumes that once transformation occurs it is permanently relevant.

This research questions the possibility of reflective discourse being achieved effectively in a classroom set-up. This is based on the difficulty of conducting classroom discourse because of the student-teacher relationship (Walsh, 2011). Most classroom discussions never become a discourse because the educator assumes an authoritative position, judging what is right or wrong (Van Zee and Minstrell, 1997). The TESE model proposes the use of in-depth interviewing techniques to surface students' underlying beliefs and assumptions.

The study also highlighted the value of taking at least 3 levels of measurement in any longitudinal study that attempts to evaluate the effectiveness of an entrepreneurship programme. Having at least a beginning, middle and end data collection provides the researcher with an opportunity to observe at what point a programme provides the greatest value. Instead of showing that there was overall improvement, this study demonstrated that statistically significant change in the respondents for factors such as disorienting dilemma and critical reflection only occurred in the initial 6 weeks of the programme. The balance of the period indicated no further significant improvements. A multi-stage data collection approach provides a more nuanced understanding of the elements of a programme that are most effective. In theory, if a repeat measure instrument does not intrude significantly into a study, it would be ideal to measure factors of interest before or after every session. This would pinpoint at what point change or transformation occurs.

7.7.2 Contribution to Practice

On the practical side, the study provided a model that can be used to develop a training programme. First, it provides a step-by-step process leading to ESE transformation. This would guide trainers in designing a programme with relevant topics needed to prepare their trainees to launch a new business.

The second contribution to practice is the emphasis on qualifying students for an entrepreneurship training programme that is, evaluating if the trainees are right for the programme being run. This is based on the reality that entrepreneurship students are at different levels of ESE and have varying levels of entrepreneurial skills, notwithstanding their level of education. In the South African context, students select or are compelled into an entrepreneurship course based on the programme in which they are enrolled (Mentoor and Friedrich, 2007). This study proposes that if the outcome of those programmes are for students to be more efficacious, then their level of ESE needs to be established before they are accepted into the programme.

The third contribution to practice is that this study specifies that critical reflection can be undertaken through guided journaling and guided meditation. The guidance to meditation and journaling should be based on elements of ESE i.e. guiding to a critical reflection on beliefs about opportunity recognition self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy.

The fourth contribution of this study is that it provides a guide to what topics need to be covered by entrepreneurship training, if the aim is to increase ESE. This assists a trainer to identify the resources needed to complete the programme. Resources such as the relevant books and articles students need to read, YouTube videos to use and entrepreneurs or professionals needed for presentations.

While entrepreneur literature recommends site visits to successful businesses, this study recommends also finding those entrepreneurs who have failed. These are people who will provide insight into the way in which things can fail. Failed businesses actually provide insight into what students of entrepreneurship should look out for.

The sixth contribution is that, while 44% for Degree courses and 56% for Diploma courses in South Africa use business planning as an assessment method (Radipere, 2012), this study recommends using prototyping and testing an idea as part of a training programme. Prototyping an idea allows an in-depth understanding of the product, which should qualify as research.

The seventh contribution to practice is that, through the TESE model, this study encourages an evaluation of students' underlying assumptions through in-depth interviewing by their peers. This helps the student explicitly question or justify to themselves their hidden assumptions about entrepreneurship.

The eighth contribution to practice is that, while many entrepreneurship studies recommend experiential learning of entrepreneurs in theoretical settings, this study suggests a more practical approach. This is achieved by students interviewing 100 potential customers of their products. This allows students an opportunity to see weaknesses in their assumptions about what their potential customers need. It also highlights to students that if they want entrepreneurial success, they need to try as much as possible to understand the problems they are trying to resolve from the customers' perspective.

7.6 RESEARCH PROCESS

In summary, this research began with an exposition of general entrepreneurship theory and the South African entrepreneurial environment. The goal was to provide a background against which the research was conducted and setting a research framework. Critical factors influencing this study was the high youth unemployment in South Africa in the age group 20 to 24 years which is 52.2% (Statistics South Africa, 2016), which meant that entrepreneurship is a viable way to escape poverty (Callaghan and Venter, 2011). This is followed by chapter 3, which positions ESE in entrepreneurship literature. It is shown that ESE is an antecedent of EI, which in turn is an antecedent of entrepreneurial action (Ajzen, 1991). This means that increasing ESE in turn increases nascent behaviour and potential entrepreneurial action. Hsu et al. (2015) argues that participating in entrepreneurship training should be counted as nascent behaviour.

Chapter 5 covers various learning theories, including the transformative learning theory by Mezirow and Marsick (1978). It was shown that transformation was the ideal outcome of entrepreneurship education (Gedeon, 2017), and the fundamental aim of entrepreneurial training was not to educate *about* entrepreneurship but to educate *for* entrepreneurship (Jesselyn and Mitchell, 2006). After the research methodology was discussed, the results of the pilot study were presented. From a factor analysis of the 20 respondents who participated in the pilot study, the analysis indicated that most of the questions loaded fairly well to factors, thus paving the way for the data collection and analysis of the main study.

The results of the research are presented in chapter 6 using multiple statistical tools. Statistical analyses of each factor culminated in hypothesis testing (repeated measures ANOVA), which showed a statistically significant improvement in all transformative learning factors.

Although this research indicated a statistically significant improvement in ESE, it did not effectively evaluate whether or not these changes were transformative. Transformative learning is a fundamental shift in beliefs (Mezirow, 2009), which was difficult to prove based on how the SHAPE programme was structured and conducted. This led to the TESE model being proposed (section 7.5.), which indicates the way in which a transformative learning programme should be set up and evaluated.

The significant contribution to both theory and the practice of entrepreneurship are presented. In the next section are recommendations which can be made based on literature reviewed, data analysed and proposals from this study.

7.8 RECOMMENDATIONS

Having conducted a longitudinal study after an intensive literature review on entrepreneurship and the reality of the South African entrepreneurial and training environments, a person is bound to see areas that can be improved. In this section a few recommendations are therefore made.

One key finding from the literature is that entrepreneurship programmes are mostly theoretical in nature. The study by Radipere (2012) shows that 100% of these programmes are examination oriented and a small 10% or less also make use of some sort of out of class exercises such as site visits. There is a need to increase the practical aspects of entrepreneurship teaching and learning. Practice leads to mastery experiences, which increases self-efficacy (Bandura, 1994). It is therefore recommended that the final result of any entrepreneurship course should partially be determined by a practical student exercise. These practical activities could be simple things such as a report submitted following a site visit or completing a business model canvass.

Using a business model canvass, students can understand business models and interconnected realities better (Joyce and Paquin, 2016). It is a cost effective teaching model and simple to use, making it a useful teaching tool (Joyce and Paquin, 2016). As part of their evaluation, entrepreneurship students could be asked to complete a business model canvass.

In addition to the business model canvass, entrepreneurship courses should begin to expose entrepreneurship students to the reality of owning and running a business. This can be accomplished by asking them to interview potential customers of their proposed product. The intention being to increase their relationship self-efficacy and also teach them that successful businesses are geared towards satisfying their customers' needs.

Like Mentoor and Friedrich (2007) before, it is recommended that any learning institution that offers entrepreneurship courses should establish and maintain relationships with entrepreneurs in their environment. This would make it easier to find and integrate entrepreneur presentations in entrepreneurship teaching. The entrepreneurs could present specific topics or share their experiences. This would provide students with a real sense of what to expect in entrepreneurship. In the selection of model entrepreneurs, this research points to the need to also be gender sensitive i.e. as far as possible include both genders as presenters.

Universities should aim to make entrepreneurship courses and classes optional. It is the researcher's opinion that people should come to entrepreneurship at their own volition and not be forced as part of their business management degrees. Smaller classes would help with making the training more practical and with that, more effective.

With so much money being expended on entrepreneurship education, all these courses should be evaluated on an ongoing basis for effectiveness. The evaluation could be multi-pronged, at student effectiveness level and at programme effectiveness level. In other words, are students' relevant measures such as ESE and EA improving after taking the course? The second level of evaluation would be, is the programme still appropriate for the skills required to be a successful entrepreneur?

Also, with so much time expended with entrepreneurship courses, there is a need to ensure that the students who participate in them have a high likelihood of success. This can be achieved through evaluating their level of desire to become entrepreneurs. If the desire is low, then they are likely not to be tenacious, a key requirement to be a successful entrepreneur (Glauser and Holland, 2016). They should be encouraged to do other things where they have a higher desire and likelihood to succeed.

Entrepreneurship lecturers should be encouraged to launch their own entrepreneurial businesses. This would make them more effective teachers, borrowing from the insights they would obtain from entrepreneurial experiences. In addition, it would reduce the dissonance that exists when a full time employee of the university is teaching about entrepreneurship. In fact, a study by Abaho et al. (2015) in East and Central Africa found that lecturers with business experience were more effective than their counterparts without business experience.

The value of business experience extends to students. This research found that most respondents indicated that their important experience to initiate a business was when they worked somewhere. Entrepreneurship students must be encouraged to look for part time jobs in other businesses in order for them to learn first-hand what is needed for a business to be successful. Even if they were to work in a low position for a large organisation, they would learn the systems that make the business operational.

Finally, a further similar study could be conducted over more students from different universities. A future study could identify similar entrepreneurship courses or programmes from different universities, and evaluate those courses' effectiveness in transforming students to be entrepreneurs.

7.9 CONCLUSION

This chapter marks the end of a study that sought to develop ESE using a transformative learning theory approach. It explored the way in which the transformative learning theory could be applied to enhance entrepreneurial self-efficacy for the youth. The results indicated that there was a significant increase in ESE among the youth who participated in the SHAPE programme. In fact, the SHAPE programme included transformative experiences, which led to an increase in developmental maturity. However, more research is needed to prove that there was a fundamental shift in their premise of thought for this improvement to qualify as transformative. Perhaps we can take solace from this failure to prove transformation from the words of Ortlieb (2017); "the challenges in education is that we are trying to measure constructs buried in the subjects we are trying to measure". To complicate this further, researchers are attempting to discover complicated concepts using language the respondents can understand (Ortlieb, 2017) but the simplified language does not accurately describe the constructs being studied.

At the heart of entrepreneurship training should be the desire to transform the identity of entrepreneurship students to entrepreneurs (and not entrepreneurship programme graduates). The TESE model proposed in this study provides a training method aimed at reducing new business failure through measurable transformative learning. This is a shift from the current focus of entrepreneurship education and training (albeit unintentionally) of producing certified entrepreneurship programme graduates instead of practising entrepreneurs. There is need to teach entrepreneurship as a skill, as proposed by the TESE Model, and not as an academic pursuit. What the country needs are more entrepreneurs and not unemployed entrepreneurship programme graduates applying for jobs? More successful entrepreneurs will reduce the scourge of unemployment, poverty and crime; the three intricately linked South African challenges.

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ANNEXURES

ANNEXURE 1 – ETHICAL CLEARANCE

Copy
Emailed
10/7/2017

14 July 2017

Mr John Nyamunda 214584285
School of Management, IT and Governance
Westville Campus

Dear Mr Nyamunda

Protocol Reference Number: HSS/1045/017D
Project Title: Developing Entrepreneurial Self-Efficacy: A transformative learning theory approach to coaching

Full Approval – Expedited Application

In response to your application received 07 July 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....

Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr Thea van der Westhuizen
cc. Academic Leader Research: Prof Brian McArthur
cc. School Administrator: Ms Angela James

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 8837/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** [redacted]
Website: www.ukzn.ac.za

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ANNEXURE 2 - LETTER FROM THE LANGUAGE PRACTITIONER

One Stop Solution
24 Firenze Gardens
Warbler Road
Cotswold Ext
Port Elizabeth
6045
www.onestopsolution.co.za

TO WHOM IT MAY CONCERN

I, Michele van Niekerk, declare that I have done the language editing for the thesis of:

John Nyamunda (214584265)

entitled:

Developing Entrepreneurial Self-Efficacy: A Transformative Learning theory approach

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in the College of Law and Management Studies in the School of Management, Information Technology and Governance at the University of KwaZulu-Natal.

I cannot guarantee that the changes that I have suggested have been implemented nor do I take responsibility for any other changes or additions that may have been made subsequently.

Any other queries related to the language and technical editing of this treatise may be directed to me at 076 481 8341.

Signed at Port Elizabeth on 24 September 2018

.....

Mrs M van Niekerk

ANNEXURE 3 – TURN IT IN REPORT (PAGE 1)

Turnitin Originality Report

PhD Final October 2018 by John Nyamunda

From MGNT7VO Advanced Global Business (2018 TEAM ASSIGNMENTS)

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ANNEXURE 4 – SUPERVISORS PERMISSION TO SUBMIT THESIS/ DISSERTATION FOR EXAMINATION

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

College of Law and Management Studies

Supervisors Permission to Submit Thesis/ Dissertation for Examination

Name: John Nyamunda	**No**: 214584265	
Title: Developing Entrepreneurial Self Efficacy: A Transformative Learning theory approach		
Qualification: PHD	**School**: School of Management, Information Technology and Governance	
	Yes	No
To the best of my knowledge, the thesis/dissertation is primarily the student's own work and the student has acknowledged all reference sources	Yes	
The English language is of a suitable standard for examination without going for professional editing.	Yes	
Turnitin Report	Attached	
Comment if % is over 10%:		
I agree to the submission of this thesis/dissertation for examination	Yes	
Supervisors Name: Dr. Thea van der Westhuizen		
Supervisors Signature:		
Date: 31/10/2018		
Co- Supervisors Name:		
Co- Supervisors Signature:		
Date:		

ANNEXURE 5 – CHANGE OF TITLE LETTER

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

15 August 2018

Mr John Nyamunda (214584265)
School of Management, IT & Governance
Westville Campus

Dear Mr Nyamunda,

Protocol reference number: HSS/1045/017D
New Project title: Developing Entrepreneurial self efficacy: A transformative learning theory approach

Approval Notification – Amendment Application

This letter serves to notify you that your request for an amendment received on 1 August 2018 has now been approved as follows:

- **Change in Title**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

Naidoo

Dr Shamila Naidoo (Deputy Chair)

/ms

cc Supervisor: Dr Thea van der Westhuizen
cc. Academic Leader Research: Professor Isabel Martins
cc. School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
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Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / anymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

ANNEXURE 6 - LETTER OF CONSENT AND QUESTIONNAIRE

Information Sheet and Consent to Participate in Research

Date: 23 October 2017

Greetings.

This is the third time that this questionnaire is being administered. The aim and purpose of this research is to evaluate the way in which confident you are about being an entrepreneur. The research will be supported by entrepreneurship training provided by SHAPE, a program run by the School of Management, Information Technology and Governance.

The study included about 300 participants who enrolled in the shape program. The SHAPE program was being run from UKZN Westville campus. It involved the following procedures; enrolling into the SHAPE program, completing the questionnaire, some training and completing the same questionnaire during and at the end of the program. The duration of your participation, if you choose to participate and remain in the study is expected to be 12weeks. The study is funded by ABSA AND Teaching and Learning Innovations and Quality Enhancement Grant.

The study may involve discomforts associated with critically examining your personal beliefs about entrepreneurship. We hope that the study will help in the design of entrepreneurship training programs which are effective in better preparing people to become entrepreneurs. In addition, the study could be a guide as to the elements which make up an effective entrepreneurial training program. An alternative method for data collection would have been to conduct in-depth interviews with participants. This would be more time consuming and limit the number of people who can participate in the research.

This study has been ethically approved by UKZN Humanities and Social Sciences Research Ethics Committee. In the event of any problems or concerns/questions, you may contact the researcher or the UKZN Humanities and Social Sciences Research Ethics Committee.

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus Govan Mbeki Building
Private Bag X 54001 Durban, 4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 **Fax**: 27 31 2604609 **Email**: HSSREC@ukzn.ac.za

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any point in time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will

be maintained by the researcher and the School of Management, IT and Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed. If you have any questions or concerns about participating in the study, please contact me or my research office on the numbers previously listed.

Yours faithfully

John Nyamunda

Questionnaire

Developing Entrepreneurial Self-Efficacy: A transformative learning theory approach to coaching

Please respond to the questions below by ticking in the relevant box. Your completion of this questionnaire is voluntary and even after completing some questions, you can choose to withdraw at any time. We collect your personal details for statistical purposes, and confidentiality of your records and answers is maintained by the School of Management, IT and Governance.

Demographics

STUDENT NUMBER					**ID NUMBER**							
First name					**Surname**							
Cell No./ Telephone No.					**Gender**	Male	1	Female	2			
Email Address												
Registered UKZN student:	Yes	1	No	2								
Race	Black	1	White	2	Indian	3	Coloured	4	Other	5		

Age:	17		18		19		20		21		22		23		24	
	25		26-30		31-35		36-40		41-45		46-50		51-55		56-60	

Section A: Important Experiences

RATING KEY

1 is No Extent, **2** is Limited Extent, **3** is neutral

Rate yourself on the following on a scale 1 to 5:

1. I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	1	2	3	4	5
2. I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	1	2	3	4	5
3. I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	1	2	3	4	5
4. I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	1	2	3	4	5
5. What was your significant experience, please specify:					

Section B: Critical Reflection

RATING KEY

1 is No Extent, **2** is Limited Extent, **3** is neutral

Rate yourself on the following on a scale 1 to 5:

6. I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me **identify opportunities to start a business**	1	2	3	4	5
7. I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me **generate new ideas of finding a market or geographic territory for a product or service of choice**	1	2	3	4	5
8. I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me **manage my own business**	1	2	3	4	5
9. I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me **work under pressure, stress and constant change experienced if I own a business**	1	2	3	4	5
10. If you have, what made you critically question your beliefs/ assumptions about starting or owning a business? Please specify:					

Section C: Reflective Discourse

RATING KEY

1 is No Extent, **2** is Limited Extent, **3** is neutral

Rate yourself on the following on a scale 1 to 5:

11. I have recently had an in depth discussion with someone in which I questioned the way I think about the way in which I can identify opportunities to start a business	1	2	3	4	5
12. I have recently had an in depth discussion with someone in which I questioned the way I think about the way in which I can find a market or geographic territory for a product or service of choice	1	2	3	4	5
13. I have recently had an in depth discussion with someone in which I questioned the way I think about the way in which I would manage my own business	1	2	3	4	5
14. I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	1	2	3	4	5

Section D: Action

RATING KEY

1 is No Extent, **2** is Limited Extent, **3** is neutral

Rate yourself on the following on a scale 1 to 5:

15. I act in a way which can help me identify opportunities to start a business	1	2	3	4	5
16. I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	1	2	3	4	5
17. I act in a way which can help me manage my own business.	1	2	3	4	5
18. I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	1	2	3	4	5

Section E: Personal factors, Background and Distortions

Rate yourself on the following on a scale 1 to 5:

RATING KEY

1 is No Extent, **2** is Limited Extent, **3** is neutral

19. I think experts in the country are supportive of starting new businesses	1	2	3	4	5
20. I think government policies are supportive of starting your own business	1	2	3	4	5
21. My culture and community are supportive of starting your own business	1	2	3	4	5
22. My religion is supportive of starting your own business	1	2	3	4	5
23. The TV, internet and media are supportive of people in business and those who start own businesses	1	2	3	4	5
24. My family will support me if I start my own business	1	2	3	4	5
25. I'm the right age to be in business or start my own business	1	2	3	4	5
26. I have the right life experiences to start my own business	1	2	3	4	5
27. I admire people who start or own their own business	1	2	3	4	5
28. I believe entrepreneurs are born with the relevant traits to start or own a business	1	2	3	4	5
29. I believe anybody can become a successful entrepreneur	1	2	3	4	5

30. There is someone in my family that owns their own business			YES	NO	
31. If your answer to the question above is YES, in your opinion the way in which successful are they in their own business?	Not at all		Not Sure	Very successful	
	1	2	3	4	5

ANNEXURE 7 - DISORIENTING DILEMMA ITEM STATISTICS

Disorienting Dilemma	Round 1				Round 2				Round 3			
	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted
DD1 I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	8.911	7.022	0.652	0.716	11.183	8.321	0.668	0.801	11.813	5.120	0.610	0.776
DD2 I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	8.867	7.490	0.568	0.757	11.211	7.785	0.734	0.772	11.780	4.763	0.712	0.729
DD3 I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	9.074	6.696	0.674	0.703	11.303	7.901	0.690	0.792	11.935	4.750	0.603	0.783
DD4 I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	8.659	7.420	0.518	0.783	10.944	8.777	0.608	0.826	11.618	4.976	0.613	0.775

ANNEXURE 8 - CRITICAL REFLECTION ITEM STATISTICS

Critical Reflection	Round 1				Round 2				Round 3			
	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted
CR1 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business	8.463	7.920	0.646	0.837	10.943	7.425	0.685	0.844	11.710	7.427	0.796	0.879
CR2 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice	8.739	8.134	0.710	0.807	11.021	7.064	0.740	0.822	11.750	7.327	0.794	0.880
CR3 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business	8.716	8.039	0.784	0.779	11.050	6.976	0.755	0.816	11.685	8.234	0.783	0.886
CR4 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business	8.851	8.173	0.653	0.831	11.177	7.461	0.694	0.840	11.694	7.548	0.802	0.877

ANNEXURE 9 - REFLECTIVE DISCOURSE ITEM STATISTICS

Reflective Discourse	Round 1				Round 2				Round 3			
	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted
RD1 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business	7.030	8.477	0.768	0.817	9.823	10.061	0.684	0.870	10.746	9.447	0.807	0.891
RD2 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice	7.304	9.034	0.758	0.822	9.979	9.692	0.782	0.835	10.738	9.980	0.810	0.891
RD3 I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business	7.230	9.581	0.747	0.829	9.922	9.144	0.780	0.834	10.680	9.442	0.807	0.891
RD4 I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	7.259	9.373	0.639	0.870	10.043	9.270	0.734	0.853	10.820	9.455	0.810	0.890

ANNEXURE 10 - ACTION ITEM STATISTICS

Action	Round 1				Round 2				Round 3			
	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted
A1 I act in a way which can help me identify opportunities to start a business	8.289	8.117	0.726	0.828	11.056	6.550	0.700	0.811	11.975	5.533	0.722	0.852
A2 I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	8.630	8.041	0.775	0.810	11.211	6.154	0.733	0.797	12.118	5.071	0.742	0.845
A3 I act in a way which can help me manage my own business.	8.289	7.894	0.704	0.838	11.070	6.647	0.713	0.807	11.933	5.216	0.794	0.824
A4 I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	8.237	8.048	0.677	0.849	11.070	6.733	0.637	0.838	11.924	5.443	0.703	0.859

ANNEXURE 11 - PERSONAL FACTORS ITEM STATISTICS

Personal Factors	Round 1				Round 2				Round 3			
	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted	Scale mean if item deleted	Scale Variance if item deleted	Corrected Item-Total Corr	Cronbach Alpha if item deleted
PF1 I think experts in the country are supportive of starting new businesses	36.563	27.130	0.450	0.650	38.752	25.100	0.352	0.593	40.283	29.901	0.647	0.737
PF2 I think government policies are supportive of starting your own business	36.516	27.275	0.433	0.653	38.774	25.559	0.326	0.599	40.336	32.529	0.448	0.764
PF3 My culture and community are supportive of starting your own business	36.359	25.697	0.498	0.639	38.708	23.458	0.403	0.579	40.150	29.718	0.665	0.735
PF4 My religion is supportive of starting your own business	35.672	27.703	0.382	0.662	37.920	23.383	0.513	0.557	39.735	31.768	0.480	0.760
PF5 The TV, internet and media are supportive of people in business and those who start own businesses	35.586	28.276	0.411	0.659	37.883	23.736	0.523	0.559	39.540	31.251	0.593	0.746
PF6 My family will support me if I start my own business	35.094	28.275	0.378	0.663	37.679	25.161	0.339	0.596	39.354	34.534	0.363	0.773
PF7 I'm the right age to be in business or start my own business	34.992	28.968	0.391	0.663	37.197	27.454	0.270	0.612	39.000	35.196	0.456	0.766
PF8 I have the right life experiences to start my own business	36.016	28.976	0.261	0.683	37.920	26.663	0.192	0.625	39.513	34.395	0.411	0.768
PF9 I admire people who start or own their own business	34.547	30.958	0.322	0.677	37.051	27.372	0.347	0.605	38.929	36.620	0.330	0.776
PF10 I believe entrepreneurs are born with the relevant traits to start or own a business	36.250	30.630	0.080	0.720	38.387	28.092	0.006	0.676	39.965	34.588	0.216	0.796
PF11 I believe anybody can become a successful entrepreneur	35.219	29.590	0.222	0.689	37.686	27.438	0.086	0.651	39.301	35.337	0.256	0.784

ANNEXURE 12 - COMMUNALITIES TABLE (ROUNDS 1-3

Communalities	Round 1		Round 2		Round 3	
	Initial	Extraction	Initial	Extraction	Initial	Extraction
DD1 I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	1.000	0.785	1.000	0.648	1.000	0.624
DD2 I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	1.000	0.722	1.000	0.695	1.000	0.738
DD3 I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	1.000	0.808	1.000	0.613	1.000	0.641
DD4 I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	1.000	0.699	1.000	0.618	1.000	0.641
CR1 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business	1.000	0.722	1.000	0.712	1.000	0.832
CR2 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice	1.000	0.763	1.000	0.766	1.000	0.772
CR3 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business	1.000	0.789	1.000	0.742	1.000	0.814
CR4 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business	1.000	0.749	1.000	0.734	1.000	0.864
RD1 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business	1.000	0.856	1.000	0.764	1.000	0.857
RD2 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice	1.000	0.782	1.000	0.782	1.000	0.843
RD3 I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business	1.000	0.750	1.000	0.770	1.000	0.846

Annexure 7 continued…

Communalities	Round 1		Round 2		Round 3	
	Initial	Extraction	Initial	Extraction	Initial	Extraction
RD4 I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	1.000	0.702	1.000	0.785	1.000	0.821
A1 I act in a way which can help me identify opportunities to start a business	1.000	0.830	1.000	0.703	1.000	0.757
A2 I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	1.000	0.810	1.000	0.752	1.000	0.794
A3 I act in a way which can help me manage my own business.	1.000	0.749	1.000	0.619	1.000	0.763
A4 I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	1.000	0.806	1.000	0.635	1.000	0.732
PF1 I think experts in the country are supportive of starting new businesses	1.000	0.744	1.000	0.654	1.000	0.806
PF2 I think government policies are supportive of starting your own business	1.000	0.709	1.000	0.761	1.000	0.569
PF3 My culture and community are supportive of starting your own business	1.000	0.793	1.000	0.628	1.000	0.803
PF4 My religion is supportive of starting your own business	1.000	0.796	1.000	0.691	1.000	0.747
PF5 The TV, internet and media are supportive of people in business and those who start own businesses	1.000	0.681	1.000	0.561	1.000	0.713
PF6 My family will support me if I start my own business	1.000	0.706	1.000	0.694	1.000	0.825
PF7 I'm the right age to be in business or start my own business	1.000	0.685	1.000	0.626	1.000	0.827
PF8 I have the right life experiences to start my own business	1.000	0.709	1.000	0.475	1.000	0.658
PF9 I admire people who start or own their own business	1.000	0.670	1.000	0.629	1.000	0.698
PF10 I believe entrepreneurs are born with the relevant traits to start or own a business	1.000	0.802	1.000	0.588	1.000	0.691
PF11 I believe anybody can become a successful entrepreneur	1.000	0.753	1.000	0.551	1.000	0.709
PF12 There is someone in my family that owns their own business	1.000	0.784	1.000	0.654	1.000	0.651
PF13 If your answer to the question above is YES, in your opinion how successful are they in their own business?	1.000	0.714	1.000	0.684	1.000	0.693

ANNEXURE 13 - TOTAL VARIANCE EXPLAINED

Round 1: Total Variance Explained

Round 1	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.144	28.082	28.082	8.144	28.082	28.082	3.288	11.336	11.336
2	2.909	10.030	38.113	2.909	10.030	38.113	3.137	10.816	22.152
3	1.742	6.008	44.121	1.742	6.008	44.121	3.024	10.428	32.581
4	1.734	5.979	50.100	1.734	5.979	50.100	2.636	9.091	41.672
5	1.599	5.515	55.615	1.599	5.515	55.615	2.198	7.580	49.252
6	1.415	4.879	60.494	1.415	4.879	60.494	2.014	6.946	56.198
7	1.191	4.105	64.599	1.191	4.105	64.599	1.754	6.049	62.246
8	1.082	3.731	68.330	1.082	3.731	68.330	1.275	4.396	66.643
9	1.045	3.604	71.934	1.045	3.604	71.934	1.272	4.386	71.028
10	1.006	3.468	75.402	1.006	3.468	75.402	1.269	4.374	75.402
11	0.822	2.835	78.238						
12	0.763	2.630	80.867						
13	0.663	2.286	83.154						
14	0.616	2.124	85.278						
15	0.529	1.823	87.101						
16	0.469	1.619	88.720						

Round 1	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
17	0.450	1.550	90.270						
18	0.426	1.470	91.740						
19	0.378	1.303	93.044						
20	0.341	1.175	94.219						
21	0.285	0.981	95.200						
22	0.276	0.951	96.151						
23	0.252	0.868	97.019						
24	0.204	0.704	97.723						
25	0.186	0.642	98.364						
26	0.151	0.521	98.886						
27	0.133	0.457	99.343						
28	0.103	0.355	99.699						
29	0.087	0.301	100.000						

Round 2: Total Variance Explained

Round 2	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.055	24.328	24.328	7.055	24.328	24.328	3.342	11.524	11.524
2	3.132	10.800	35.128	3.132	10.800	35.128	3.235	11.157	22.681
3	2.248	7.750	42.878	2.248	7.750	42.878	2.947	10.163	32.844
4	1.655	5.706	48.584	1.655	5.706	48.584	2.891	9.969	42.813
5	1.634	5.634	54.218	1.634	5.634	54.218	2.374	8.185	50.998
6	1.366	4.709	58.927	1.366	4.709	58.927	1.749	6.030	57.028
7	1.267	4.369	63.296	1.267	4.369	63.296	1.668	5.752	62.780
8	1.178	4.064	67.360	1.178	4.064	67.360	1.328	4.579	67.360
9	0.932	3.215	70.575						
10	0.879	3.031	73.606						
11	0.837	2.885	76.491						
12	0.751	2.589	79.080						
13	0.699	2.411	81.492						
14	0.624	2.153	83.645						
15	0.601	2.072	85.716						
16	0.560	1.930	87.646						
17	0.478	1.647	89.293						
18	0.447	1.541	90.834						

Round 2	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
19	0.390	1.345	92.180						
20	0.359	1.237	93.417						
21	0.325	1.120	94.537						
22	0.289	0.996	95.534						
23	0.250	0.861	96.394						
24	0.227	0.784	97.178						
25	0.209	0.722	97.900						
26	0.172	0.594	98.494						
27	0.162	0.559	99.053						
28	0.147	0.506	99.559						
29	0.128	0.441	100.000						

Round 3: Total Variance Explained

Round 3	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.568	26.097	26.097	7.568	26.097	26.097	3.825	13.188	13.188
2	3.074	10.601	36.699	3.074	10.601	36.699	3.443	11.873	25.061
3	2.657	9.161	45.859	2.657	9.161	45.859	3.441	11.864	36.925
4	2.090	7.206	53.066	2.090	7.206	53.066	2.820	9.723	46.649
5	1.529	5.271	58.337	1.529	5.271	58.337	2.377	8.196	54.844
6	1.450	5.001	63.338	1.450	5.001	63.338	1.902	6.560	61.404
7	1.198	4.131	67.469	1.198	4.131	67.469	1.459	5.032	66.436
8	1.157	3.989	71.457	1.157	3.989	71.457	1.358	4.684	71.120
9	1.006	3.469	74.927	1.006	3.469	74.927	1.104	3.807	74.927
10	0.959	3.308	78.235						
11	0.750	2.588	80.823						
12	0.717	2.471	83.294						
13	0.673	2.322	85.616						
14	0.606	2.090	87.706						
15	0.526	1.813	89.519						
16	0.458	1.580	91.099						
17	0.377	1.301	92.400						
18	0.326	1.122	93.523						
19	0.294	1.013	94.535						

Round 3	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
20	0.275	0.949	95.484						
21	0.258	0.890	96.374						
22	0.209	0.719	97.093						
23	0.186	0.642	97.736						
24	0.157	0.540	98.276						
25	0.135	0.464	98.740						
26	0.124	0.426	99.166						
27	0.100	0.343	99.510						
28	0.087	0.299	99.809						
29	0.055	0.191	100.000						

ANNEXURE 14 - ROTATED COMPONENT MATRIX

Round 1 Item	Components 1	2	3	4	5	6	7	8	9	10
CR2 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice	0.796	0.230	0.133	0.141	0.007	0.039	0.125	-0.040	0.081	0.112
CR3 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business	0.796	0.164	0.255	0.135	0.147	0.076	0.007	0.090	-0.101	0.007
CR1 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business	0.766	0.080	0.212	0.214	-0.108	0.046	0.023	-0.007	0.072	-0.136
CR4 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business	0.721	0.187	0.221	0.196	0.170	0.072	0.109	0.203	-0.097	-0.098
A1 I act in a way which can help me identify opportunities to start a business	0.170	0.847	0.129	0.212	0.057	0.089	-0.003	-0.036	0.091	0.037
A2 I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	0.199	0.773	0.308	0.236	-0.055	-0.003	0.064	0.015	0.083	0.093
A4 I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	0.383	0.650	0.280	0.191	-0.013	0.006	0.058	0.253	-0.063	-0.223
A3 I act in a way which can help me manage my own business.	0.163	0.633	0.237	0.414	-0.008	-0.006	0.063	0.185	-0.177	0.156
RD1 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business	0.240	0.127	0.850	0.106	-0.100	-0.030	-0.096	-0.134	-0.096	0.034
RD2 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice	0.244	0.171	0.800	0.149	-0.169	-0.009	-0.010	0.017	-0.025	-0.035
RD3 I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business	0.221	0.341	0.701	0.121	0.153	0.097	0.067	0.024	-0.139	0.149
RD4 I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	0.329	0.435	0.565	-0.009	0.230	0.058	0.086	-0.040	0.134	-0.036
PF8 I have the right life experiences to start my own business	0.007	0.216	0.370	0.300	0.197	0.329	-0.103	0.183	0.337	-0.361
DD1 I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	0.114	0.305	0.228	0.781	0.035	-0.038	0.013	0.018	-0.015	-0.114
DD2 I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	0.196	0.155	-0.082	0.774	-0.053	0.198	-0.006	-0.042	0.097	-0.014
DD3 I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	0.313	0.145	0.206	0.756	0.130	0.094	0.064	0.037	-0.134	0.164
DD4 I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	0.272	0.239	0.218	0.467	0.211	0.151	-0.056	0.372	0.045	-0.302
PF1 I think experts in the country are supportive of starting new businesses	-0.033	-0.042	-0.013	0.024	0.831	0.105	0.085	0.055	0.033	0.167
PF2 I think government policies are supportive of starting your own business	0.112	0.023	0.023	0.094	0.757	-0.062	0.294	0.081	0.099	-0.079
PF5 The TV, internet and media are supportive of people in business and those who start own businesses	0.339	0.084	-0.290	0.047	0.501	0.315	-0.054	-0.275	0.059	-0.200
PF11 I believe anybody can become a successful entrepreneur	0.014	0.404	-0.014	-0.102	0.483	0.229	-0.300	-0.133	-0.428	0.033
PF9 I admire people who start or own their own business	0.075	-0.036	-0.020	0.138	0.078	0.780	-0.015	-0.003	-0.089	0.146
PF6 My family will support me if I start my own business	0.056	-0.025	0.017	-0.007	-0.068	0.714	0.386	0.196	-0.009	-0.017
PF7 I'm the right age to be in business or start my own business	0.057	0.215	0.094	0.109	0.172	0.677	0.020	-0.012	0.020	-0.356
PF4 My religion is supportive of starting your own business	0.140	0.163	-0.045	0.080	0.050	0.038	0.842	-0.135	-0.036	-0.094
PF3 My culture and community are supportive of starting your own business	0.038	-0.076	0.022	-0.064	0.307	0.204	0.785	0.143	0.090	0.020
PF12 There is someone in my family that owns their own business	0.100	0.076	-0.116	0.019	0.031	0.095	0.005	0.857	0.035	0.096
PF10 I believe entrepreneurs are born with the relevant traits to start or own a business	0.001	0.050	-0.137	-0.043	0.108	-0.058	0.025	0.007	0.849	0.207
PF13 If your answer to the question above is YES, in your opinion how successful are they in their own business?	-0.059	0.149	0.120	0.027	0.111	-0.013	-0.107	0.120	0.251	0.756

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 9 iterations.

Round 2 Item	Components							
	1	2	3	4	5	6	7	8
DD2 I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	0.768	0.130	0.271	0.069	-0.001	0.043	0.047	0.077
DD4 I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	0.721	0.112	0.097	0.209	0.030	-0.175	-0.018	-0.039
DD3 I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	0.678	0.185	0.248	0.223	-0.012	-0.033	-0.065	-0.053
DD1 I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	0.626	0.189	0.382	0.085	0.039	0.221	0.112	-0.060
PF7 I'm the right age to be in business or start my own business	0.453	-0.108	-0.076	0.219	0.366	0.267	0.078	-0.379
RD2 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice	0.199	0.831	0.089	0.117	-0.008	-0.006	0.133	-0.110
RD3 I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business	0.180	0.821	0.095	0.210	0.045	0.047	-0.066	0.039
RD4 I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	0.133	0.788	0.273	0.196	0.127	0.018	0.008	0.125
RD1 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business	0.036	0.765	0.093	0.228	0.105	0.144	0.129	-0.263
A2 I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	0.162	0.250	0.758	0.255	-0.016	0.139	0.068	0.000
A1 I act in a way which can help me identify opportunities to start a business	0.212	0.040	0.736	0.162	-0.119	0.219	-0.032	-0.161
A3 I act in a way which can help me manage my own business.	0.332	0.265	0.628	0.133	0.045	-0.061	-0.127	-0.060
PF8 I have the right life experiences to start my own business	0.210	0.047	0.594	-0.045	0.135	-0.154	0.174	0.039
A4 I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	0.543	0.137	0.554	0.051	0.072	0.007	-0.079	-0.028
CR1 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business	0.096	0.245	0.124	0.775	-0.072	0.140	-0.028	-0.047
CR2 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice	0.201	0.152	0.127	0.774	-0.281	-0.025	0.046	-0.070
CR3 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business	0.181	0.305	0.109	0.750	-0.133	-0.086	-0.114	-0.061
CR4 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business	0.477	0.203	0.063	0.658	0.060	-0.125	-0.006	0.089
PF4 My religion is supportive of starting your own business	0.020	0.117	0.011	-0.129	0.803	-0.024	0.114	-0.047
PF3 My culture and community are supportive of starting your own business	-0.048	0.201	0.097	-0.205	0.721	-0.035	0.104	0.049
PF6 My family will support me if I start my own business	0.383	-0.167	-0.105	0.021	0.673	0.200	-0.096	0.072
PF5 The TV, internet and media are supportive of people in business and those who start own businesses	-0.152	0.040	0.369	-0.063	0.460	0.035	0.427	-0.022
PF13 If your answer to the question above is YES, in your opinion how successful are they in their own business?	0.139	0.058	-0.044	-0.140	-0.012	0.733	-0.026	0.320
PF11 I believe anybody can become a successful entrepreneur	-0.129	0.083	0.075	0.008	0.001	0.699	0.182	0.007
PF9 I admire people who start or own their own business	0.006	0.014	0.150	0.187	0.342	0.537	0.116	-0.390
PF2 I think government policies are supportive of starting your own business	0.088	-0.033	0.056	-0.077	-0.020	0.072	0.858	-0.041
PF1 I think experts in the country are supportive of starting new businesses	-0.062	0.203	-0.062	0.022	0.247	0.161	0.704	0.152
PF12 There is someone in my family that owns their own business	0.008	-0.108	-0.129	-0.033	0.031	0.203	0.128	0.752
PF10 I believe entrepreneurs are born with the relevant traits to start or own a business	-0.183	-0.179	0.350	0.393	0.234	-0.072	-0.141	0.407

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 13 iterations.

Round 3 Item	Components								
	1	2	3	4	5	6	7	8	9
A2 I act in a way which can help me have new ideas of finding a market and/or geographic territory for a product or service of choice	0.843	0.121	-0.028	-0.044	0.137	-0.009	-0.108	0.186	-0.020
A1 I act in a way which can help me identify opportunities to start a business	0.832	0.163	-0.022	0.072	0.143	0.080	-0.051	0.058	-0.021
A4 I act in a way which can help me work under pressure, stress and constant change experienced if you own a business	0.789	0.045	0.145	0.123	0.172	0.180	0.052	0.073	-0.049
A3 I act in a way which can help me manage my own business.	0.779	0.226	0.039	0.132	0.229	0.127	-0.069	0.064	-0.092
PF8 I have the right life experiences to start my own business	0.625	0.174	0.092	0.078	0.067	0.265	0.180	-0.229	0.253
RD1 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can identify opportunities to start a business	0.079	0.891	0.116	0.076	0.134	-0.028	0.049	0.129	-0.001
RD3 I have recently had an in depth discussion with someone in which I questioned the way I think about how I would manage my own business	0.109	0.878	0.222	0.069	0.067	0.014	0.014	-0.055	0.036
RD2 I have recently had an in depth discussion with someone in which I questioned the way I think about how I can find a market or geographic territory for a product or service of choice	0.269	0.839	0.224	0.069	0.037	0.070	-0.029	0.015	-0.066
RD4 I have recently had an in depth discussion with someone in which I questioned the way I think about my ability to work under pressure, stress and constant change experienced if I own a business	0.232	0.794	0.307	0.046	0.140	0.039	-0.102	0.088	-0.030
CR1 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me identify opportunities to start a business	0.031	0.136	0.876	0.166	0.084	0.034	0.024	-0.079	-0.043
CR4 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me work under pressure, stress and constant change experienced if I own a business	0.006	0.186	0.871	-0.041	0.210	-0.002	0.001	0.149	0.049
CR3 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me manage my own business	0.025	0.246	0.827	0.044	0.097	0.212	-0.016	0.117	-0.002
CR2 I recently have critically questioned my beliefs or assumptions about starting or owning a business in a way which can help me generate new ideas of finding a market or geographic territory for a product or service of choice	0.081	0.254	0.812	0.131	0.085	-0.050	0.106	-0.023	-0.058
PF1 I think experts in the country are supportive of starting new businesses	-0.004	0.044	0.029	0.813	0.133	0.100	0.293	-0.169	-0.005
PF3 My culture and community are supportive of starting your own business	0.168	0.115	-0.006	0.794	-0.004	-0.092	0.013	0.335	0.101
PF5 The TV, internet and media are supportive of people in business and those who start own businesses	0.064	0.213	0.164	0.718	0.099	0.253	-0.141	0.039	0.163
PF4 My religion is supportive of starting your own business	0.318	0.016	0.230	0.640	-0.263	-0.016	-0.189	0.278	0.018
PF2 I think government policies are supportive of starting your own business	-0.038	-0.081	0.078	0.557	0.108	0.202	0.322	-0.165	-0.247
DD2 I have had important experiences (practical/ emotional/ life changing) in the past which can help me develop relationships with people necessary for business success	0.117	0.179	0.171	0.010	0.807	0.086	-0.045	0.010	0.042
DD3 I have had important experiences (practical/ emotional/ life changing) in the past which can help me manage my own business	0.327	0.181	0.063	0.163	0.679	-0.055	-0.080	-0.018	-0.008
DD4 I have had important experiences (practical/ emotional/ life changing) in the past which can help me work under pressure, stress and constant change experienced if I own a business	0.238	0.003	0.383	0.083	0.626	0.005	-0.074	0.066	0.169
DD1 I have had important experiences (practical/ emotional/ life changing) in the past which can help me identify opportunities to start a business	0.181	0.021	0.054	-0.102	0.607	0.211	0.330	0.198	-0.128
PF7 I'm the right age to be in business or start my own business	0.399	0.179	0.099	0.136	0.030	0.744	0.161	0.096	0.133
PF11 I believe anybody can become a successful entrepreneur	0.036	-0.197	0.076	0.234	0.248	0.692	-0.147	-0.177	-0.122
PF9 I admire people who start or own their own business	0.257	0.106	0.012	0.003	-0.062	0.670	0.118	0.313	0.237
PF13 If your answer to the question above is YES, in your opinion how successful are they in their own business?	-0.176	0.037	-0.034	0.036	-0.174	0.136	0.730	0.167	-0.218
PF10 I believe entrepreneurs are born with the relevant traits to start or own a business	0.123	-0.111	0.171	0.210	0.192	-0.132	0.640	-0.127	0.331
PF6 My family will support me if I start my own business	0.170	0.106	0.123	0.129	0.152	0.109	0.063	0.845	0.018
PF12 There is someone in my family that owns their own business	-0.064	-0.041	-0.046	0.050	0.030	0.119	-0.045	0.028	0.789

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 12 iterations.

ANNEXURE 15 - MANN WHITNEY U TEST (ROUNDS 1-3)

		Round 1		Round 2		Round 3	
		Mann-Whitney	Asymp. Sig (2 tailed	Mann-Whitney	Asymp. Sig (2 tailed	Mann-Whitney	Asymp. Sig (2 tailed
Disorienting Dilemma	DD1	1850.500	0.029	405.500	0.626	1433.500	0.081
	DD2	1748.000	0.008	428.500	0.895	1441.500	0.086
	DD3	1870.000	0.048	419.000	0.781	1511.500	0.243
	DD4	1985.000	0.191	433.000	0.950	1623.500	0.596
	DD	**1596.500**	**0.004**	**415.000**	**0.742**	**1366.000**	**0.073**
Critical Reflection	CR1	1831.500	0.025	388.000	0.446	1674.000	0.713
	CR2	1749.500	0.009	419.000	0.778	1680.500	0.741
	CR3	1623.500	0.003	417.000	0.987	1476.000	0.126
	CR4	1717.000	0.012	410.000	0.898	1457.500	0.160
	CR	**1547.000**	**0.003**	**391.000**	**0.898**	**1517.500**	**0.307**
Reflective Discourse	RD1	2104.000	0.358	383.500	0.577	1676.500	0.937
	RD2	1957.000	0.152	435.000	0.975	1664.000	0.880
	RD3	2070.500	0.339	386.500	0.437	1676.500	0.937
	RD4	2037.000	0.220	339.500	0.135	1550.500	0.544
	RD	**1952.000**	**0.196**	**354.000**	**0.324**	**1650.000**	**0.973**
Action	A1	1791.500	0.020	371.500	0.301	1330.000	0.097
	A2	1956.500	0.111	420.000	0.791	1461.500	0.254
	A3	1770.000	0.023	319.000	0.083	1458.000	0.297
	A4	1756.500	0.017	385.000	0.411	1618.500	0.824
	A	**1687.500**	**0.014**	**350.000**	**0.248**	**1363.000**	**0.217**
Personal Factors	PF1	2189.500	0.588	400.000	0.567	1653.500	0.731
	PF2	2238.000	0.746	408.500	0.655	1622.500	0.604
	PF3	2222.000	0.695	321.000	0.076	1649.500	0.970
	PF4	2118.500	0.487	286.000	0.031	1433.500	0.397
	PF5	2093.500	0.326	392.000	0.464	1544.500	0.397
	PF6	2014.000	0.163	373.000	0.302	1574.000	0.406
	PF7	2114.000	0.560	369.000	0.198	1638.500	0.605
	PF8	2225.500	0.910	397.000	0.737	1664.000	0.770
	PF9	1943.000	0.126	412.500	0.777	1391.500	0.049
	PF10	1957.500	0.117	436.000	0.988	1669.000	0.950
	PF11	2281.500	0.895	381.500	0.363	1466.500	0.172
	PF12	2105.000	0.314	373.000	0.357	1417.500	0.043
	PF13	1379.500	0.783	244.000	0.796	1007.500	0.978
	PF	**1829.000**	**0.368**	**342.500**	**0.455**	**1247.500**	**0.346**

ANNEXURE 16 - OUTCOME OF DOCTORAL RESEARCH PROPOSAL

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

To: Mr John Nyamunda (214584265)

From: School Of Management, IT & Governance

Date: 23 June 2017

Subject: Outcome of Doctoral Research Proposal

Student Name & Student Number:	**Title on Proposal:**
Mr John Nyamunda (214584265)	**Developing Entrepreneurial Self-Efficacy: A transformative learning theory approach to coaching.**
Qualification, Major & Campus:	**Supervisor: Dr Thea van der Westhuizen**
PhD, Management, Westville	**Co- Supervisor: N/A**
Proposal submission Date:	**21 April 2017**
Decision:	**Proceed with suggestions** **Corrections to the proposal done subject to the approval of the supervisor.**

Attached to this letter please find the following documents:

Review 1

Review 2

Review 3

Please note the comments/suggestions made are intended to develop and strengthen your study, thus you need to consider them seriously. Your supervisor will provide further guidance on how to factor the suggestions into your study.

Yours sincerely,

Prof Isabel De Azevedo Martins
AL: Research & Higher Degrees
School of Management, IT & Governance
University of KwaZulu-Natal – Westville Campus